USER MANUAL

IRRIWISE™ MANAGER

NETAFIM™
GROW MORE WITH LESS

Table of Contents

IrriWise™ Manager

IrriWise™ Manager

1. GENERAL OVERVIEW

1.1 Introduction

The IrriWise system is a management tool that provides the grower with better control over crop irrigation and farm resources by collecting and interpreting real time data from the field. It uses state of the art radio technology to collect field data in real time and transfer it wirelessly to your PC, where it is analyzed and presented in a user-friendly manner, allowing easy data interpretation, improving real-time decisions and history analysis.

1.2 System Structure

Basic Local Application
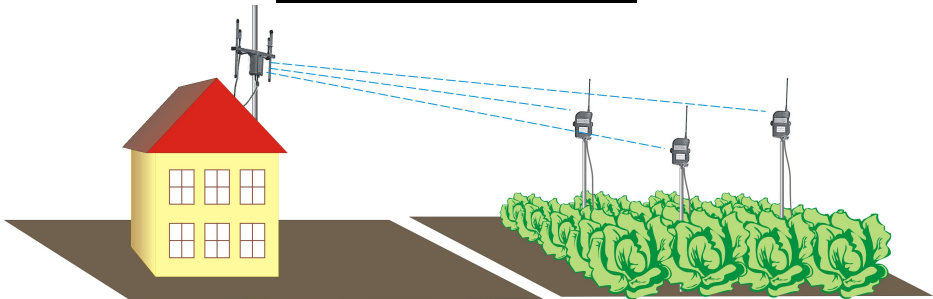
Remote Application

Internet

GPRS
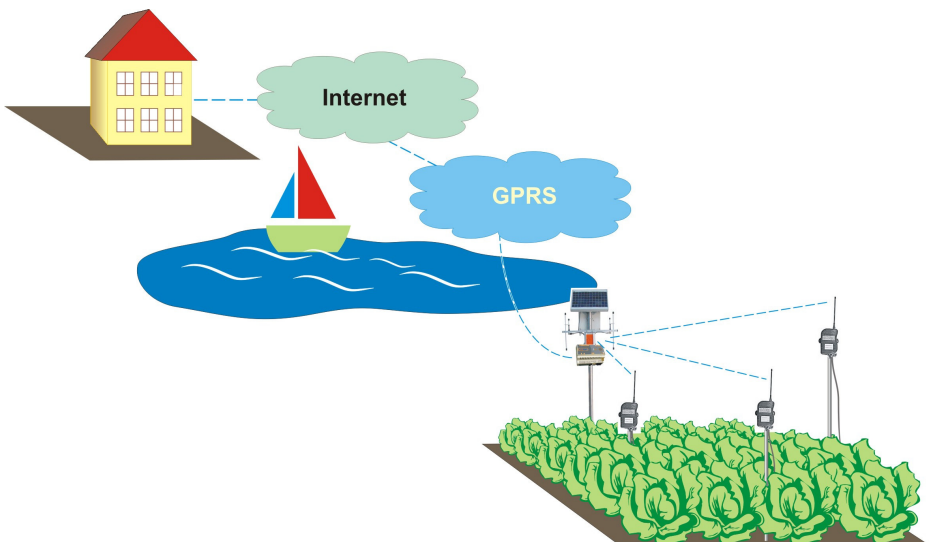
IrriWise™ Manager

1.3   Work Area

IrriWise Manager Work Area Screen

A- Main Menu and Tool Bars

B- Explorer Bar

C-Main Media Window

D- Status Bar

IrriWise™ Manager

USER

2. GENERAL

2.1 Creating a System User and Logging In

Creating a System User: (Configured during installation process by an authorized Netafim technician)
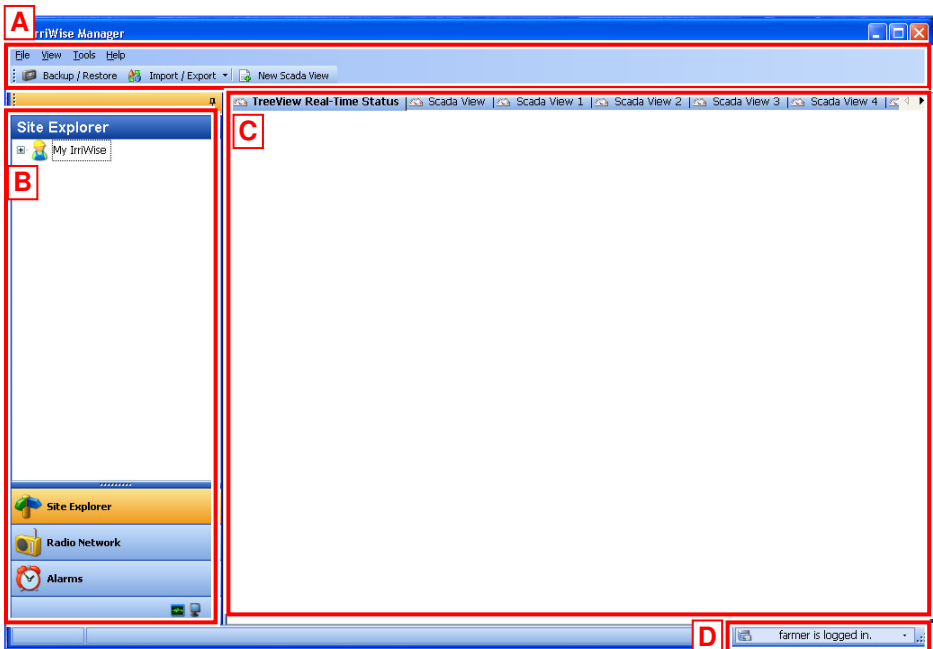
When opening the IrriWise application for the first time, the system prompts you to create a user that will automatically logon to the system every time it is started. The default user will be logged on automatically.
Create the auto-logon user as follows:

SELECT

IrriWise Manager

PERFORM
Create a username and password:
⇨Farmer as "Power User" in Access Level

SELECT
Save and Close

Access Level				
User	Read-Only	Save Changes (Modifications)	Raw Data (Transmission Data Analysis)	Radio Monitor
Read-Only	✓	✗	✗	✗
Normal User	✓	✓	✗	✗
Power User	✓	✓	✓	✗
Field support (Installer)	✓	✓	✓	✓

Read Only- The user will not be able to enter data or make any changes.
Normal User- Full read & write privileges.
Power User- Administrator privileges, including user management.
Field Support (Installer)- Special user designed for use by field support technicians.

Crop Management Technologies

IrriWise™ Manager

Logging in:

Generally, when the IrriWise Manager application is opened, the default system user is logged into the system automatically. However, there are some cases in which a login procedure is required:

- A default user is not defined
- Logging in as a different user
- Logging in as a guest

Logging in Without a Default User:

If, for some reason, a default user was not defined, a login procedure is required. This login procedure allows the system to recognize the user and load their own personal profile. It also denies access to unauthorized users. To log into IrriWise Manager, perform the following step:

If the identification is incorrect, a Login Failed message appears.
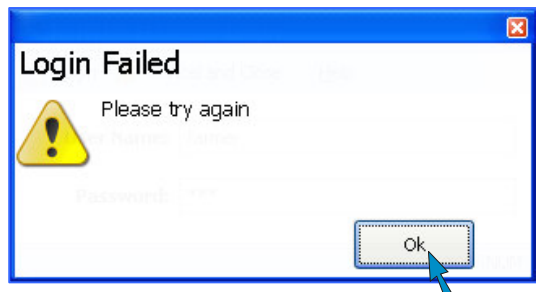
Caps Lock and Num Lock keys and try again

**For your convenience, Caps Lock and Num Lock indicators appear at the bottom right corner of the IrriWise Login window. If the problem persists, contact the IrriWise support personnel
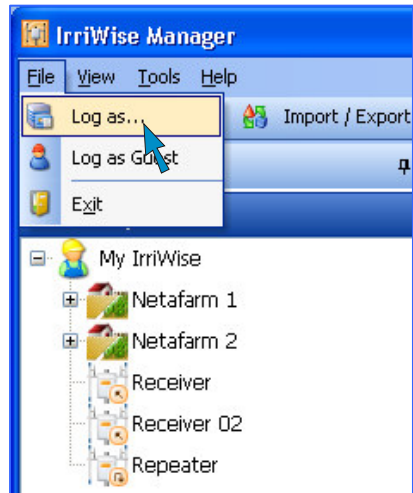
IrriWise™ Manager

Logging in as a Different User:
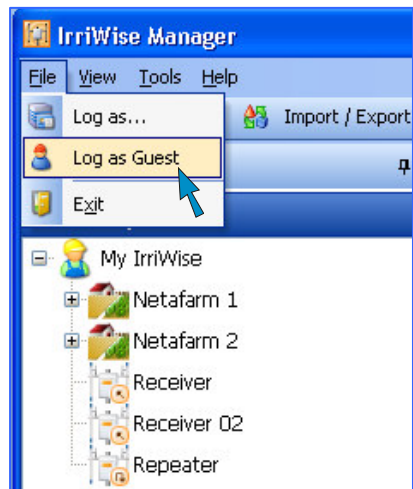To log into the system as a new user:

In IrriWise Manager-

SELECT *File ⇨ Log as...*

OR

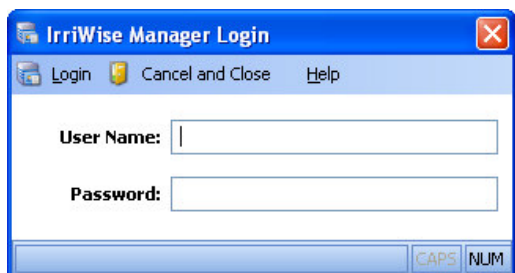Logging in as a Guest:
To log into the system as a guest:

In IrriWise Manager-

SELECT *File ⇨ Log as Guest*

SELECT Username and password ⇨ *Login*

IrriWise™ Manager

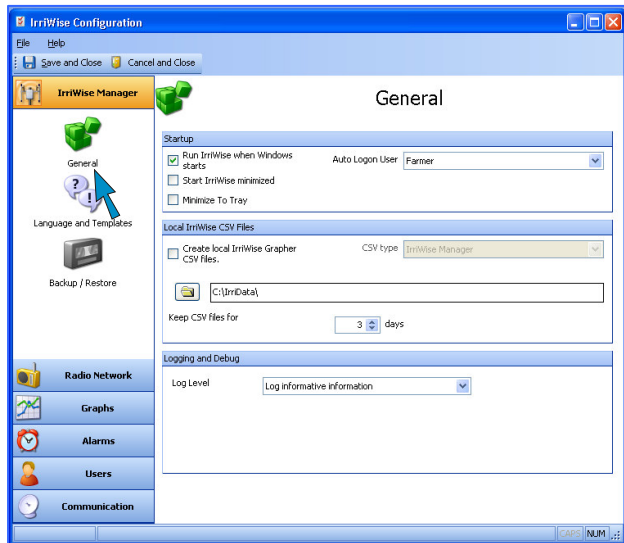## 2.2   Properties and Settings

The system settings should be configured by the system administrator after the first activation of the application.

General Settings:
In the Tools menu-

SELECT **Options ➩ General**


Startup

Run IrriWise when Windows starts- Starts IrriWise automatically when Window starts up.

Start IrriWise minimized- Starts IrriWise in a minimized window.

Minimize To Tray- If selected, the IrriWise window will be minimized to an icon in the system tray instead of the taskbar.

Auto Logon User- The selected user will be logged on automatically (use the dropdown list to select the desired user).

Local IrriWise CSV Files
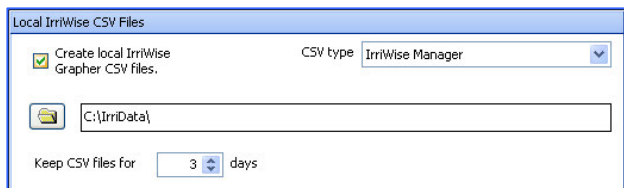
Local IrriWise Grapher CSV files are Comma Separated Values (CSV) files, which hold the data and configuration of the Grapher application. They could also be used to export data to other applications. In IrriWise Manager 2.6 this option is disabled by default.
Selecting this option will also enable the CSV file-type dropdown list. Please select the desired CSV type and the folder in which to store the CSV files. Either leave the default folder that is already selected, or click on the BROWSE button to select a different folder. Specify the number of days for which the CSV files will be kept. The files will be deleted automatically after the specified period to save disk space.

IrriWise™ Manager

Logging and Debug

Log Level- Specify the level at which system events are logged (to be used according to service personnel request, when trying to analyze and solve problems).

*** Please note that the higher the log level, the more disk space will be consumed by the log files (up to 5MB).
The available options are as follows**:**
- Log debug information
- Log informative information
- Log warn information
- Log error information
- Log fatal error information only
- Don't log anything

Language and Templates:

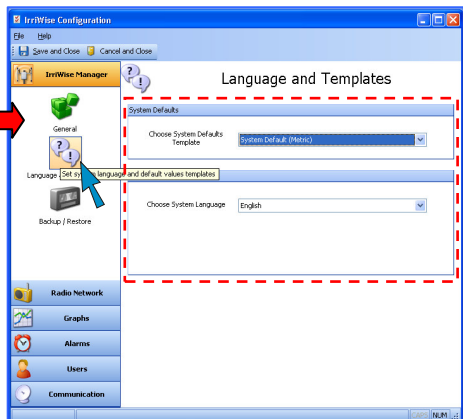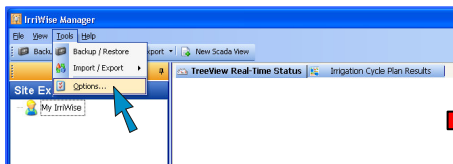The IrriWise application supports several languages and various weight and measuring units.

To configure the Language and Templates options:

 Tools ⇨ Options   *Language and Templates*

 ⇨Desired weight and measurement units (Metric or Imperial)
⇨Desired language for the system interface

IrriWise™ Manager

3. GRAPHS

3.1 General

IrriWise Manager lets you display graphs of both single elements, as well as combined graphs of several elements in a unit. It also offers various tools to control the graphs display.
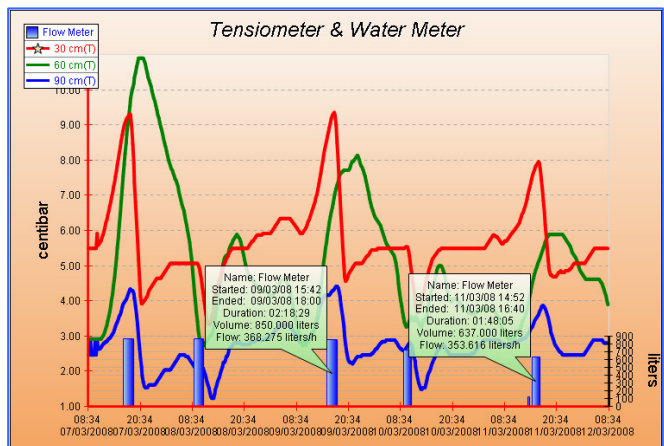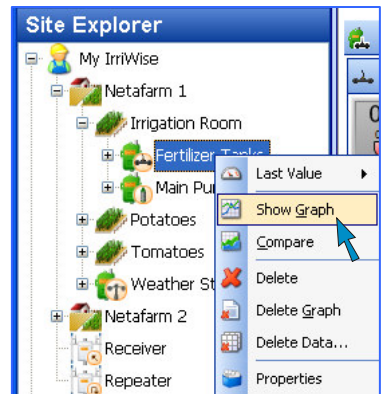
To display graphs:

**On a unit or element**

Show Graph

The displayed graph will include the information of the sub units and elements included in this unit. For example, if you display a graph of an irrigation block, it will show all its transmitters their respective sensors. To view the relevant data setup of a specific graph line, click on the appropriate unit in the graph's legend.

IrriWise™ Manager

3.2 Graph Settings

These are the global settings for viewing graphs in the IrriWise Manager. This window allows you to configure various graph parameters such as how many days of data to view, default line width etc...
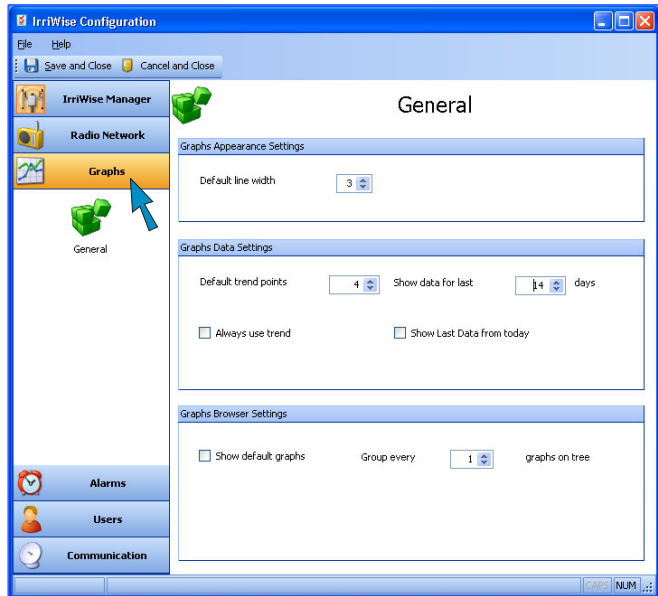
Graphs Appearance Settings

Default line width- Specify the graphs line width (in pixels).

 Tools ➩ Options

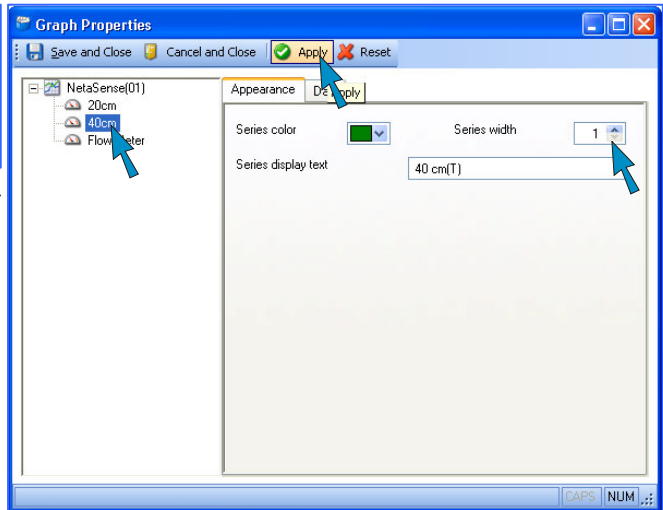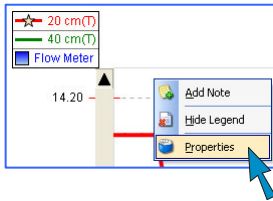 *Graphs ➩ Default line width ➩ Set desired width*

IrriWise™ Manager

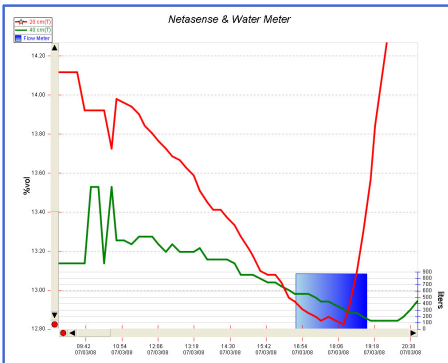Can also change line widths within graphs in Graph Properties:

RIGHT CLICK — On graph ➡ **SELECT** — *Properties ⇨ Select desired Series width (repeat if necessary for each series/sensor) ⇨ Apply*
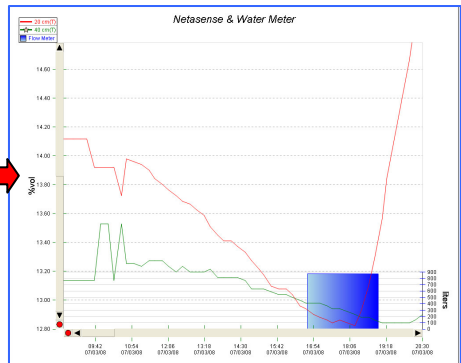

SELECT — *Save and Close*

Series width: 3

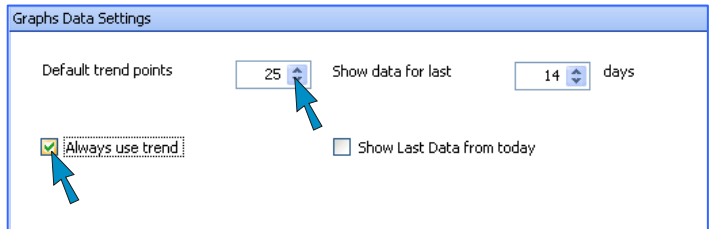**Series width: 1**

Graphs Data Settings

Default trend points- The default number of points for a moving average trend calculation. This calculation is used for smoothing lines in order to better view the data trend.

SELECT *Tools ⇨ Options* ➡ **SELECT** *Graphs ⇨ Default trend points ⇨ Enter desired value*

Can also change trends within graphs in Graph Properties:
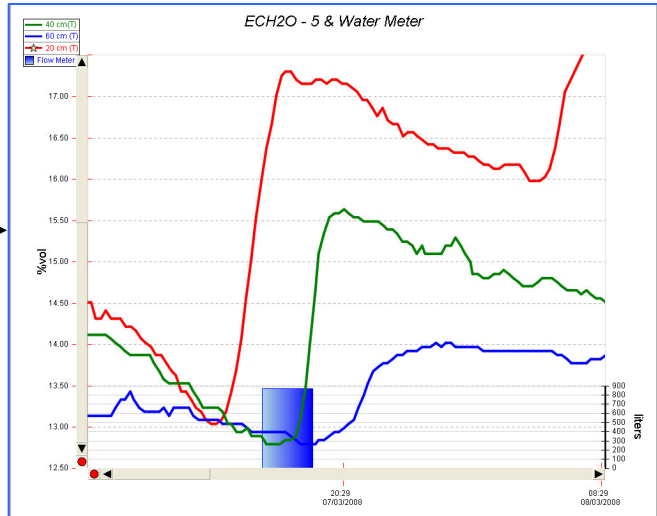
RIGHT CLICK On graph ➡ **SELECT** *Properties ⇨ Select desired Trend points in the Data tab (repeat if necessary for each series/sensor) ⇨ Apply*
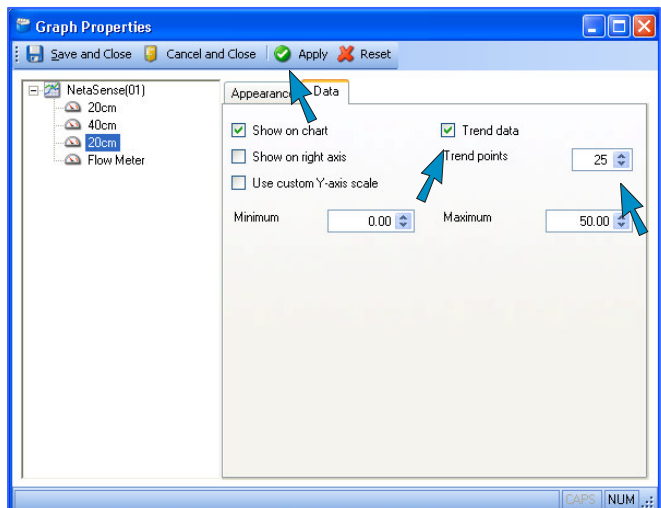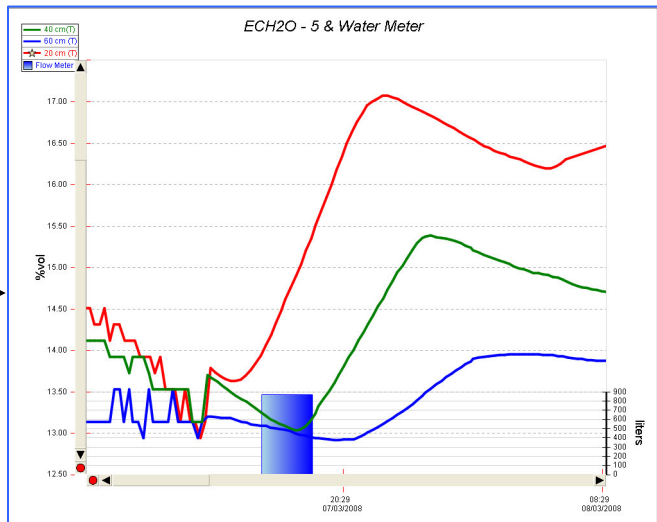
SELECT *Save and Close*

IrriWise™ Manager

Trend points value: 4

Trend points value: 25

Show data for the last # days- Specify the number of days for which the data is displayed.

Always use trend- Always use the moving average calculation for data.

Show Last Data from today- Shows the "last" data from today and backward, instead of default setting from the last date of last data point and backward.

Graphs Browser Settings

Show default graphs- Show default graphs on Site Explorer.

Group every # graphs on tree- When the number of graphs under a certain node in the Site Explorer (e.g. a location) exceeds X, the graphs' icons will be grouped together under a graph icon with a +/- mark that will collapse and expand them.
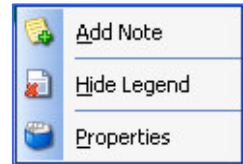
IrriWise™ Manager
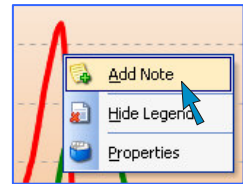
3.3 Editing Graphs

RIGHT CLICK — Graph area ➡ SELECT — Desired option from menu

Add Note
Hide Legend
Properties

To add a note on the graph:

RIGHT CLICK — Desired area on graph ➡ SELECT — Add Note

Add Note
Hide Legend
Properties
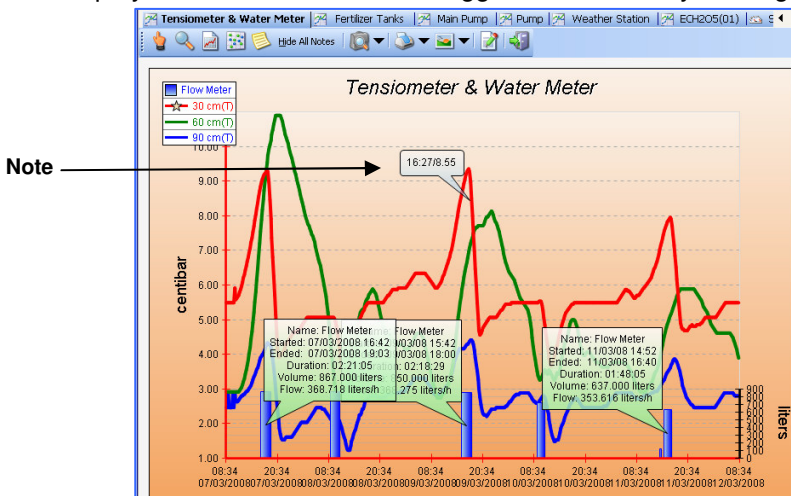
SELECT — Background color ➩ Enter text ➩ OK

Note Editor
Background
16:27/8.55
OK   Cancel
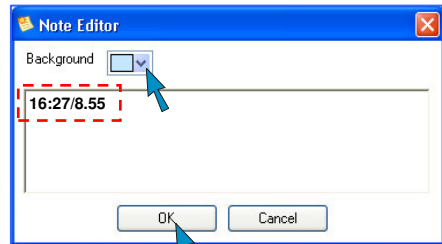
The note will be added close to the point in which the cursor was placed when this option was selected.
After the note is displayed, the note text can be toggled on and off by clicking on it.

Tensiometer & Water Meter   Fertilizer Tanks   Main Pump   Pump   Weather Station   ECH2O5(01)

Hide All Notes

Tensiometer & Water Meter

Flow Meter
30 cm(T)
60 cm(T)
90 cm(T)

Note —

16:27/8.55

Name: Flow Meter
Started: 07/03/2008 16:42
Ended: 07/03/2008 19:03
Duration: 02:21:05
Volume: 867.000 liters
Flow: 368.718 liters/h

Flow Meter
03/08 15:42
03/08 18:00
02:18:29
50.000 liters
275 liters/h

Name: Flow Meter
Started: 11/03/08 14:52
Ended: 11/03/08 16:40
Duration: 01:48:05
Volume: 637.000 liters
Flow: 353.616 liters/h

centibar

liters

08:34   20:34   08:34   20:34   08:34   20:34   08:34   20:34   08:34   20:34   08:34
07/03/2008 07/03/2008 08/03/2008 08/03/2008 09/03/2008 09/03/2008 10/03/2008 10/03/2008 11/03/2008 11/03/2008 12/03/2008

Crop Management Technologies

IrriWise™ Manager

Show/Hide All Notes:
Once you add a note, a Show/Hide All Notes button in is enabled on the graph toolbar. This button toggles the display of notes on and off.
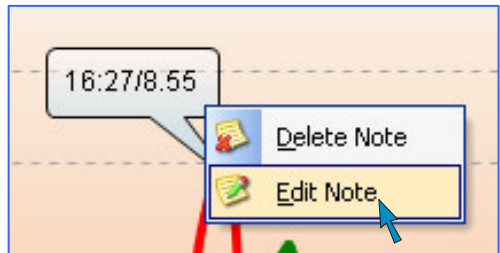

Editing a note:
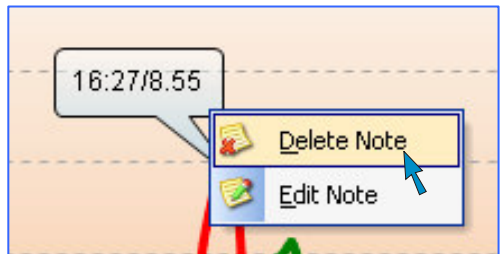
 On a note ➡ *Edit Note* ⇨ Enter new text
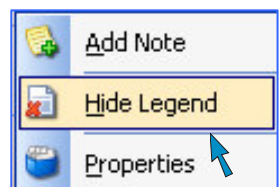

Deleting a note:

 On a note ➡ *Delete Note*

Show/Hide Legend:
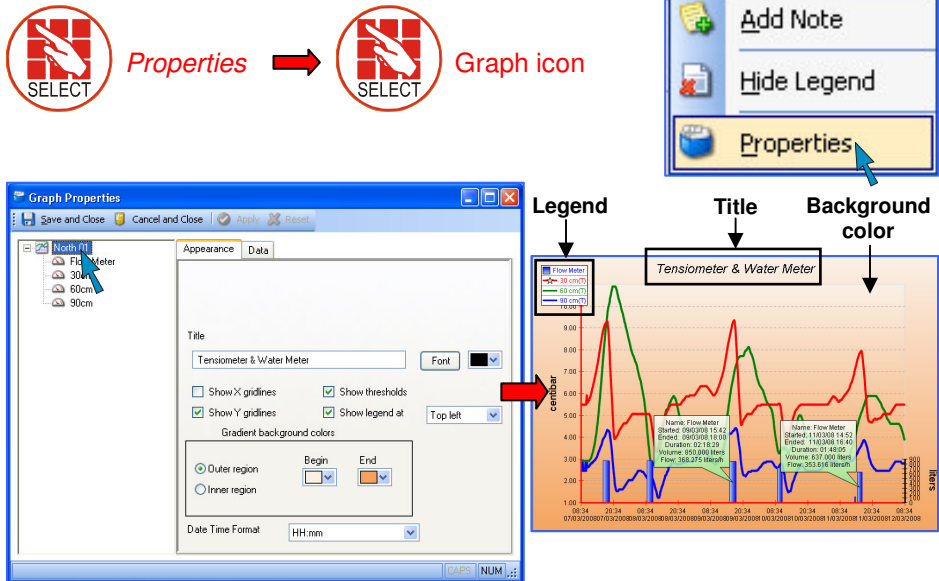Toggles the legend display at the top-left corner of the graph on and off.

IrriWise™ Manager

Properties:
Allows you to define the graph properties. There are two properties configuration modes:

General graph properties:

Appearance tab:
Title- You can change the graph title, font and font color. Select/deselect items to display; X gridlines, Y gridlines, thresholds, and determine the spot in which the legend is displayed.

Gradient background color- You can change the colors of the graphs inner and outer regions to either eve colors or gradients by selecting colors from the dropdown lists.

Date Time format- Select the desired date time format from the dropdown list.

 Save and Close

Data tab:
In this tab you can select the number of recent days, which you want to include in the graph.
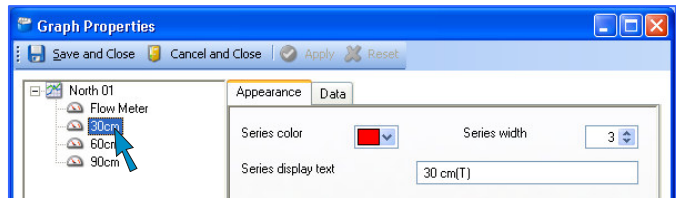
Crop Management Technologies
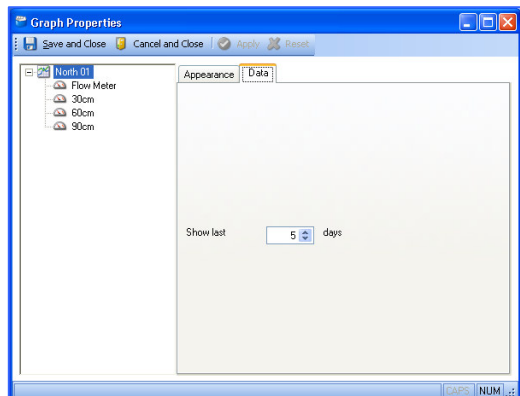
IrriWise™ Manager

Sensor graph properties:

 Sensor icon

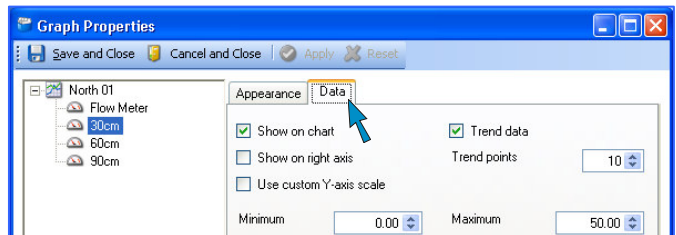This will open the specific sensor graph properties configuration window.

Appearance tab:

 Series color ⇨ series width ⇨ series display text

Data tab:

 Data tab

Show on chart- Show or hide the graph line

Trend Data- The number of points for a moving average trend calculation. This calculation is used for smoothing lines in order to better see the data trend. If you select Trend data, the Trend points field is enabled, allowing you to specify the number of trend points.

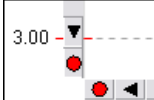**Show on right axis-** Toggles the display of the vertical axis from left to right.

Use custom Y-axis scale- The user can set a custom Y-axis on the graph instead of using the default setting where the Y-axis range is automatically based on data to be displayed.

IrriWise^{TM} Manager

3.4 The Graph Toolbar

The graph toolbar provides a set of tools for manipulating graphs.
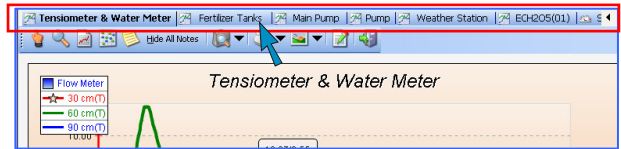
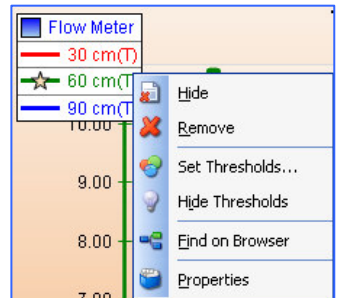|	
	Pointer- Lets you drag the graph image within the graph window after zooming, to display hidden parts of the graph. • Click on the pointer icon to select it. • Place the cursor on the graph. • Press and hold down the mouse button, and drag as desired. ***The pointer's dragging action is enabled **only after using the zoom option.**
	Zoom- Lets you zoom in on specific areas in the graph. • Click on the zoom icon to select it. • Place the cursor in a graph area you would like to enlarge. • Press and hold down the mouse button at the left of the area you wish to enlarge, and drag to the right to select the desired graph area. To zoom out, repeat the process in the opposite direction: Press and hold down the mouse button at the right of the desired area, and drag to the left. Alternatively you can press on the red points that are enabled after zooming at the corner of the axes. You can repeat this action again, to increase the zoom rate. Add a blank control. This is useful for arranging the displayed controls in groups, by adding additional space between items.
	Show values according to mouse position- • Click on the icon to select it. • Place the cursor on a desired point on the graph. • Press and hold down the mouse button; the point's value will be displayed.
	Show data points- • Click to display the data points on the graph.
Hide All Notes	**Hide All Notes-** Hide the graph's notes.
	Change data mode- Click on the arrow and select; Last Data or All Data to determine the data displayed by the graph. The time frame for the data displayed when you choose last data is what you set as the default in graph setting, but you can set it for each graph individually.
	Printing options- Click on the arrow and select: • Page setup- Setup print parameters. • Preview- Show a preview of the print. • Print- Print the graph.
	Image options- Click on the arrow and select: • Save as- To save the graph image. • Copy to clipboard- To copy the graph image to the clipboard.
	Rename the current graph- Open a dialog in which you can rename the current graph. If you rename the graph or change any of the properties mentioned above, you will be asked if you wish to save the new settings upon exiting the graph. If you save the settings, a graph icon with the new name will appear on the Site Explorer.
	Exit graph

IrriWise™ Manager

Navigation Between Graphs:

SELECT — Desired graph in graph toolbar

Legend Menu:

RIGHT CLICK — On legend to show menu

Hide/Show- Toggles the appearance of the graph for the particular element on which you click. If hidden, this item will change to Show.

**Set Thresholds-** Open the threshold table for this element.

Hide/Show Thresholds- Toggles the 2 threshold lines on the graph.

Find on browser- Highlight the graph's element in IrriWise Manager Explorer on the left pane.

Properties- Opens the element configuration screen.

3.5 Flow Meter Graphs

Clicking on a bar in a flow meter graphs will display the various flow-meter data according to the flow meter settings.
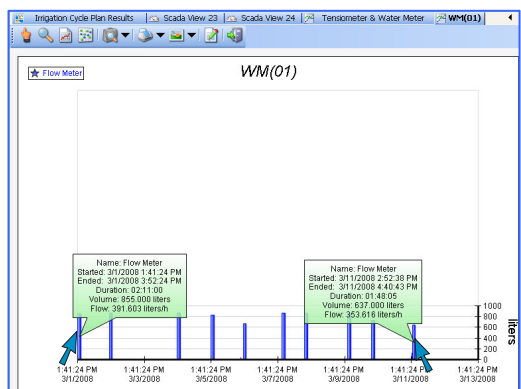
To hide the data display, click again.

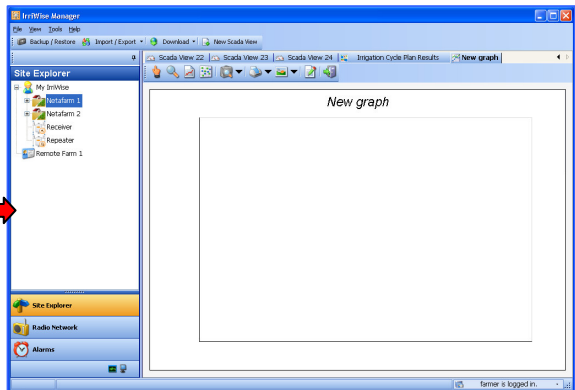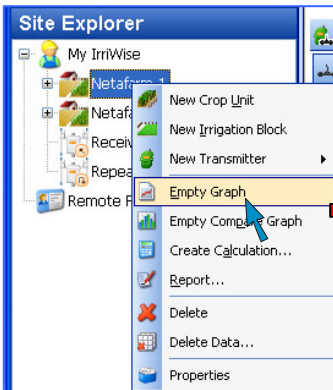# IrriWise™ Manager

3.6 Empty Graph

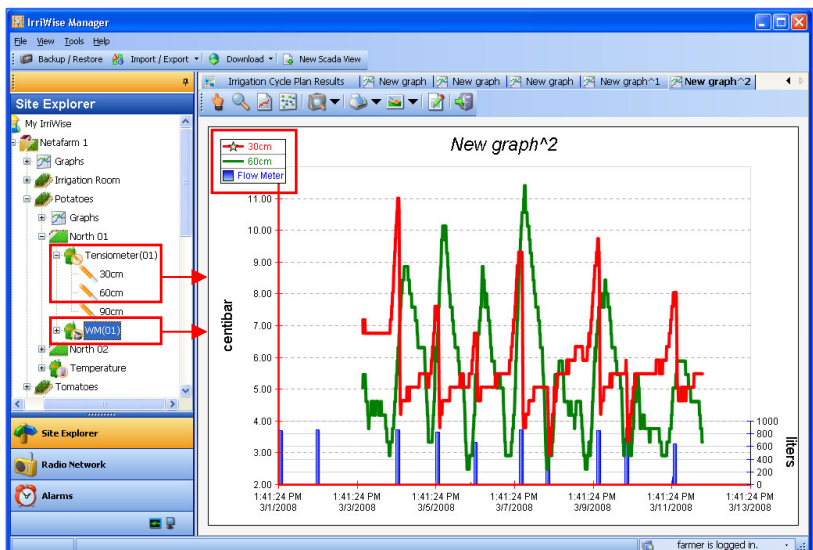Empty Graph allows you to open a graph of a particular area and sensor.

RIGHT CLICK   On desired area in Site Explorer   ➡   SELECT   *Empty Graph*

RIGHT CLICK   Transmitters and/or specific sensors from left pane and drag and drop them into empty graph

As the graph's legend indicates, the above graph displays information from North 01's 30cm and 60cm tensiometers as well as its water meter.
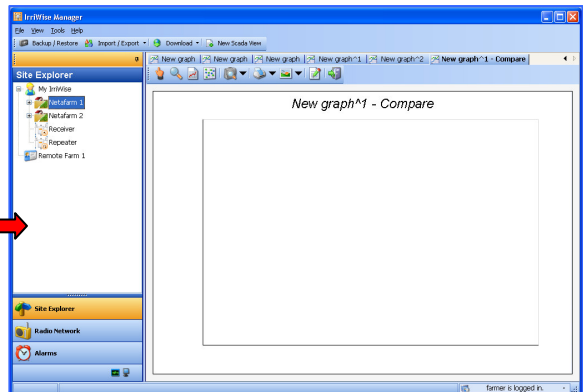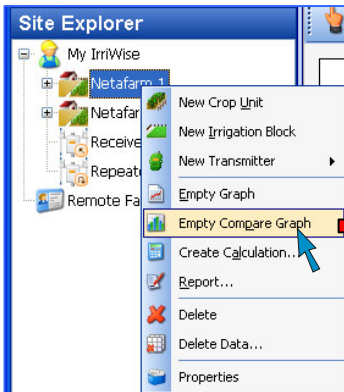
IrriWise™ Manager

3.7 Empty Compare Graph

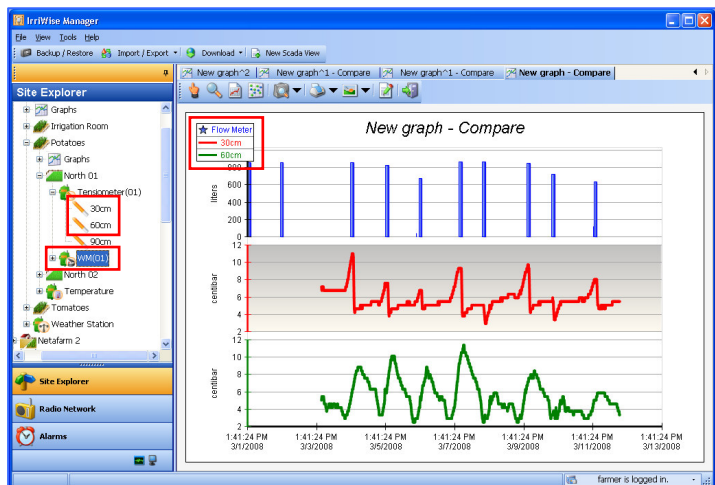Empty Compare Graph allows you to compare information from multiple transmitters and/or sensors.

RIGHT CLICK — On desired area in Site Explorer ➡ SELECT — *Empty Compare Graph*

SELECT — Transmitters and/or specific sensors from left pane and drag and drop them into empty graph

As the graph's legend indicates, the above graph displays information from North 01's 30cm and 60cm tensiometers as well as its water meter.

Crop Management Technologies
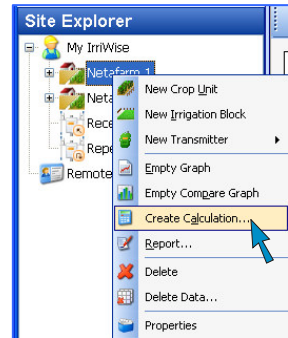
IrriWise™ Manager

3.8 Create a Calculation Graph

IrriWise Manager can create graphs that are based on calculations of daily sensor data. The results of the calculations are displayed as graphs. A calculated daily point – like the daily average or maximum – will be displayed at 12:00 noon as the time of the daily data.
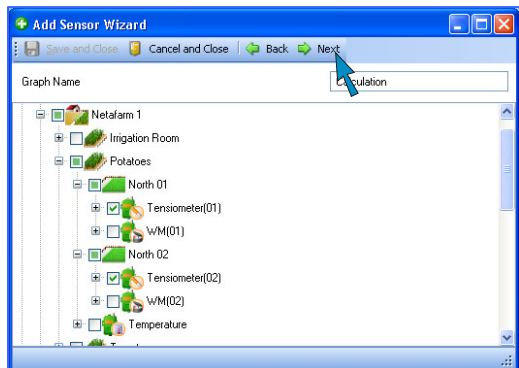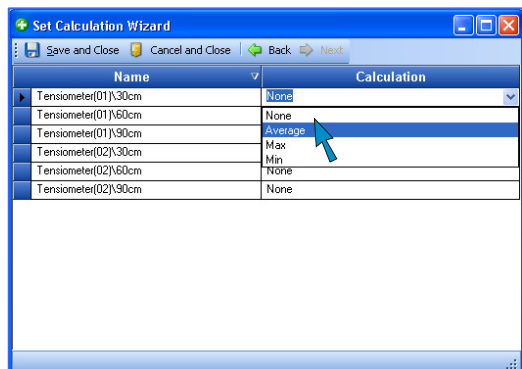
To create a calculation:

SELECT   *Create Calculation*

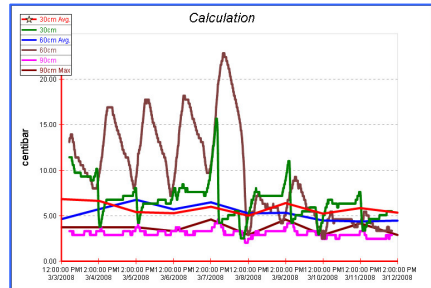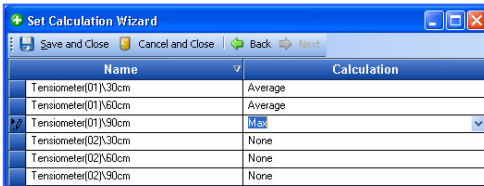**SELECT**   Location to expand ⇨ Desired sensors ⇨ *Next*

SELECT   Field in the *Calculation* column ⇨ Desired calculation ⇨ *Save and Close*

The calculation options may vary according to the sensor.

IrriWise™ Manager

IrriWise Manager will display a graph with the selected calculations.
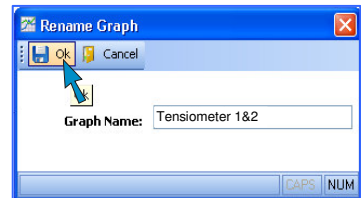

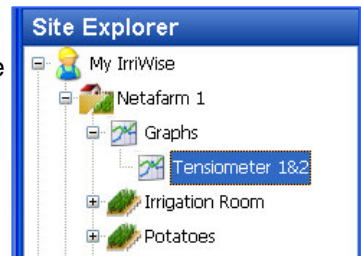To save a calculation graph:

 Rename the Current Graph icon

 Enter Name ➪ *OK* to save

 Exit icon

After the graph is saved, you will find it under the location in the left pane.

You can now drag it and place it where convenient, i.e., under the sensor it corresponds to.

Additional Options:
Right-clicking on a calculation graph will open a menu that allows you to open the graph, delete it, and add a calculation.
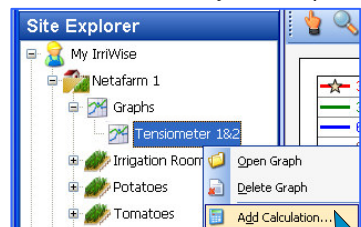
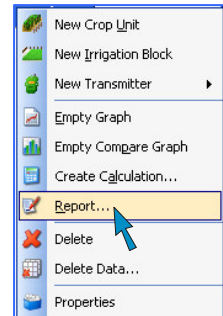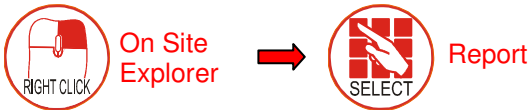To add calculations:

 Desired graph ➡ *Add Calculation*

Proceed as described above in "To create a calculation". You will be prompted to save the added calculations when you exit the graph.
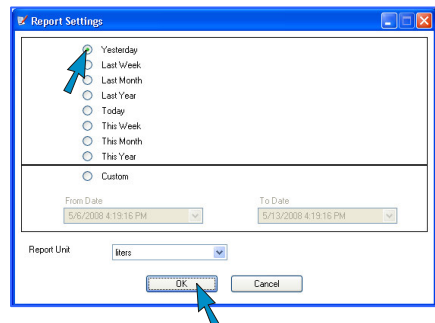
IrriWise™ Manager

4. REPORTS

4.1 General

IrriWise Manager lets you display a water report for rain, water, drain and fertilizer meters.

4.2 Settings

Yesterday- Show a water report for yesterday (the whole day).
Today- Show a water report for today from yesterday midnight up until now.

Last Week- Show a water report of the previous week, from the first day of last week to the first day of this week.

This Week- Show a water report from the first day of this week up until now.

Last Month- Show a water report from the first of last month to the first of this month.

This Month- Show a water report from the first of this month up until now.

Last Year- Show a water report from the first of January last year to the first of January this year.

This Year- Show a water report from the first of January this year up until now.

Custom- Show a water report for a custom period of time.

Report Unit- Select the volume units for the report.

Crop Management Technologies

IrriWise™ Manager

4.3 Reports

The report window is divided to 3 sections, one for each type of meter. If no transmitters of a type are defined, that section will not be shown. The information appearing on the report is as follows:

- **Section Title** - The element for which the report was created (location, transmitter etc'), the time period and the units.

- **Section Table** – The name of the meter, the path (on the site explorer), the meter amount, the block amount (calculated from the meter's settings), the water height.

- At the end of each row and under the include column, there is a check box indicating whether the meter is included in the report or not.

By using the report window tool bar you can perform the following actions:

Export to Excel- Export the report to an Excel file.
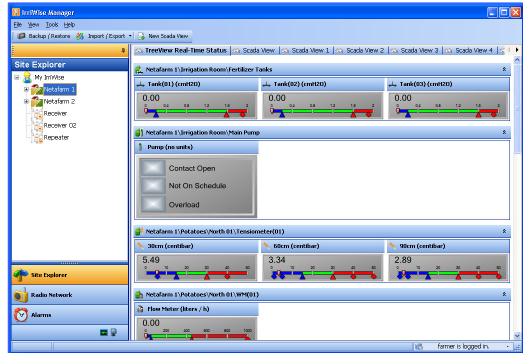
Print- Print the report.

Close- the report.

Crop Management Technologies

IrriWise™ Manager

5. SCADA VIEWS

5.1 Real Time Status

IrriWise Manager displays sensors graphically as gauges and controls on a dashboard. The sensor data is updated in real time, each time data transmission is received.

An entity or element's graphical display can be collapsed and expanded by clicking on the arrows at the right of the item's title bar.

Find on Browser:
Right-clicking on the corresponding element opens a menu with various items, according to the element type.
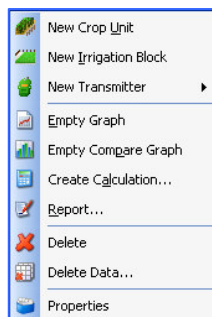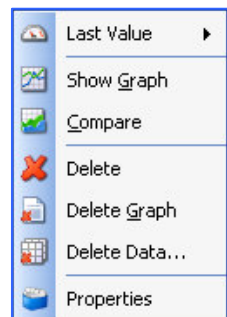
 On display ➡ *Find on Browser*

The corresponding element will be selected in the IrriWise Site Explorer in the left pane.

 Corresponding element to display a menu with various items according to the type of the element

Location menu   Sensor menu
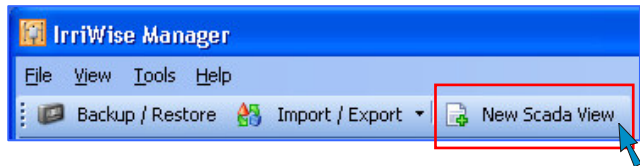
IrriWise™ Manager

5.2 Creating a New Scada View

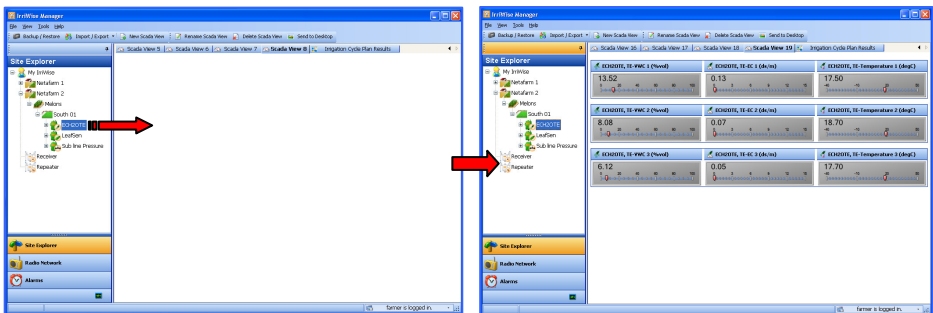IrriWise Manager lets you create and customize graphical views of the Site Explorer.

To create customized SCADA views:

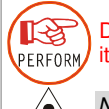**SELECT** *New Scada View*

PERFORM Drag desired sensors from the Site Explorer left pane and drop on the right pane.

Optional:
You can rearrange the items in the new scada view (right pane):

PERFORM Dragging and dropping items
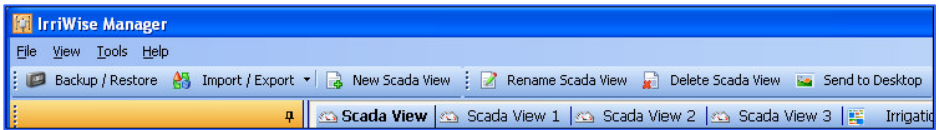
⚠ NOTE: When you drag an item to a different place, and before you release the mouse button and drop it, a red line marks the spot where it will be dropped.
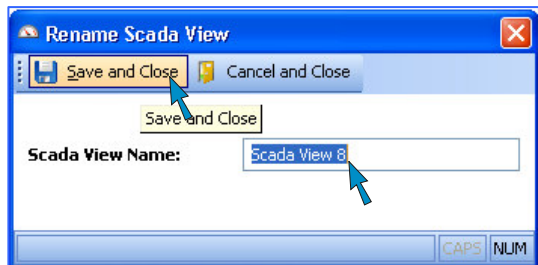
IrriWise™ Manager

Optional:
Renaming a Scada View

 Desired scada view ➡ *Rename Scada View* button

 Enter new name ➡ *Save and Close*

Optional:
Deleting a Scada View

 Desired scada view ➡ *Delete Scada View* button
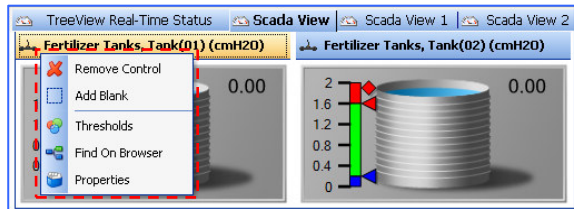
IrriWise™ Manager

Scada view menu:
Once you populate a SCADA view, you can use the menu to perform several actions on SCADA view items.

 On an item in the scada view ➡ Desired action

Remove Control- Remove the item from the Scada view.

Add Blank- Add a blank control. This is useful for arranging the displayed controls in groups, by adding additional space between items.

Thresholds- Open the sensor's thresholds dialog box for editing.

Find on browser- Mark the gauge's sensor in the Site Explorer pane.

Properties- Open the sensor's properties for editing.

Send to desktop (optional):
IrriWise Manager offers an option to place a Scada view in an independent window on the desktop and at the front of other programs' windows. This allows you to keep an eye on certain IrriWise Manager elements while continuing with your other work.
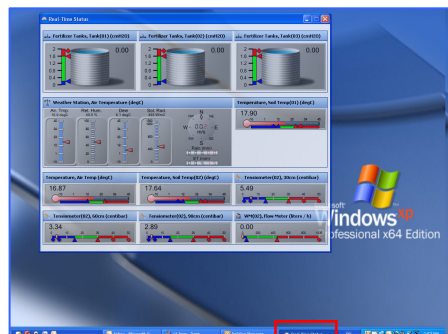
 Desired scada view ➡ *Send to Desktop* button

The new independent desktop Scada View window will become available.

To display desktop Scada view and bring it to the front of the application you are in, click on the Scada view window in the Windows task bar.
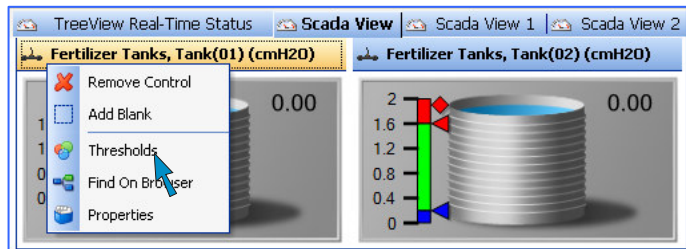
IrriWise™ Manager

5.3 Threshold Settings

The way values are displayed and the colors used are determined by the display's Threshold settings. You can adjust threshold in two ways:
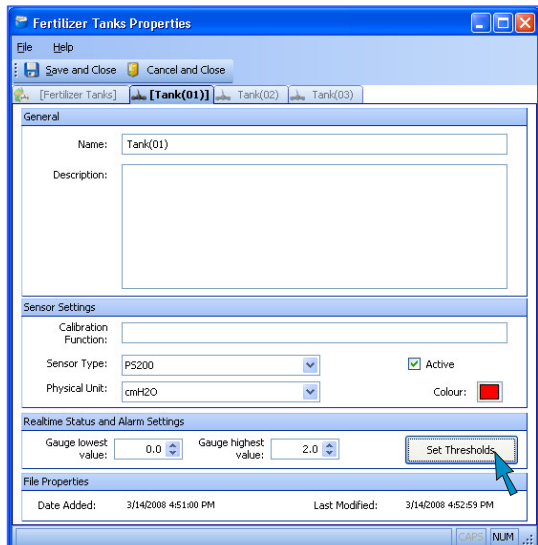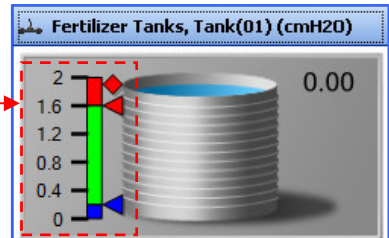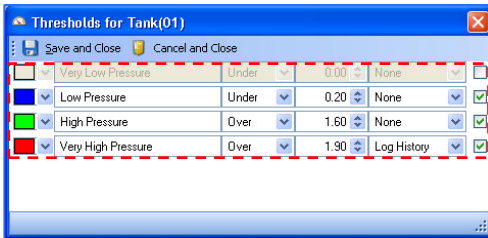
 Desired scada view ➡ *Thresholds*

OR

 *Properties ➪ Set thresholds* in properties menu

 Desired thresholds

IrriWise™ Manager

1. In the thresholds window, use the fields dropdown lists to select colors and options. Select and enter values, or use the arrows on the right of the value fields to adjust values.

2. Drag the control sliders to the desired points. (Note that when placing the cursor above a point on the gauges scale, the exact value is displayed in a tool tip.)

3. You can also turn the display of some parameters off, by selecting/deselecting the parameter checkbox on the right.
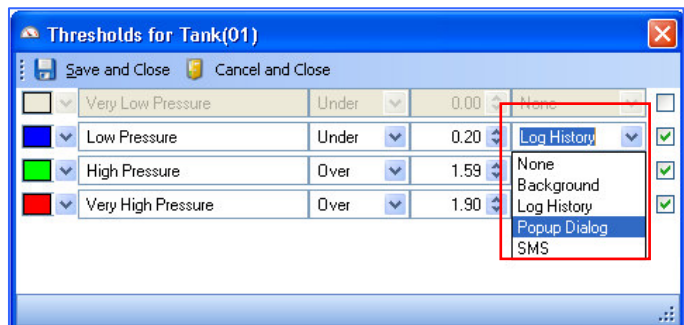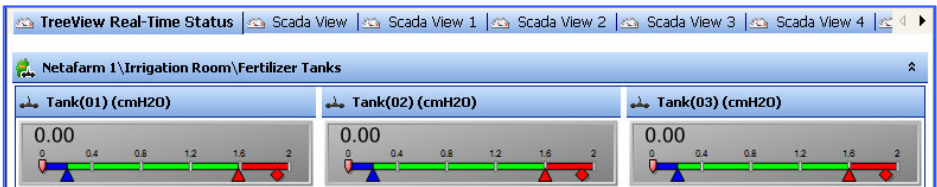
Threshold alert setting- When selecting 1 option, all other options listed before it in the dropdown list are automatically activated. I.e., when selecting Popup Dialog, the alert will also change the scada view's background color and log the alert's history. (See section 9.1 for more information on Alarm Settings)

Save and Close

IrriWise™ Manager

6. IRRIGATION PLANS

6.1 Making and Editing an Irrigation Plan

IrriWise Manager allows you to create detailed irrigation plans per irrigation block, and monitor their execution.
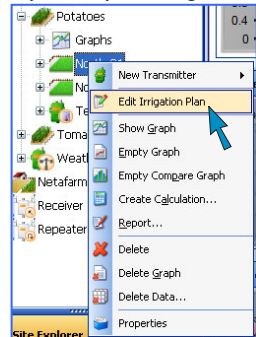
On desired irrigation block **RIGHT CLICK** ➡️ **SELECT** *Edit Irrigation Plan*

⚠️ NOTE: When editing an irrigation plan for a crop unit, the plan will apply to all irrigation blocks under that same crop unit. The amounts of water will be set proportionally according to block size definitions. Later on, an irrigation block's irrigation plan can be edited separately.

⚠️ NOTE: When editing an irrigation plan for a crop unit, IrriWise Manager will prompt for deletion of all irrigation plans of the blocks (if any plans exist) that fall under that same crop unit. If you do not wish to delete all block plans, edit them individually.
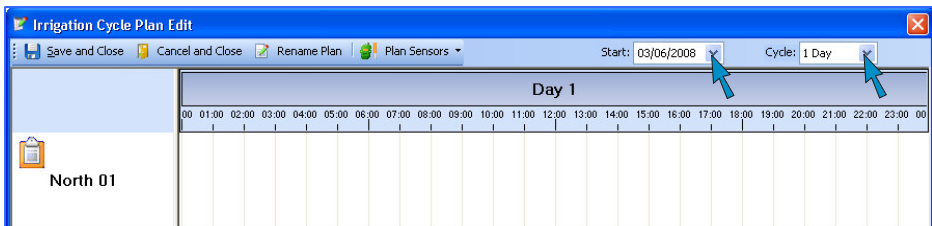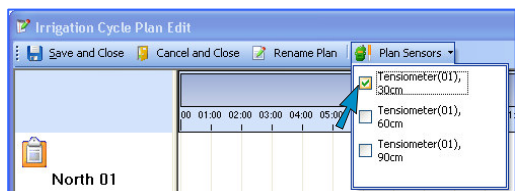
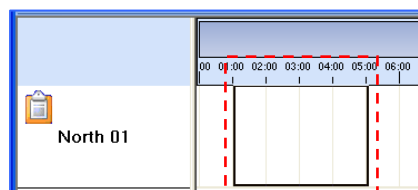**SELECT** Start date ➡️ **SELECT** Cycle- desired # of days

SELECT Plan Sensors- desired sensors for the plan

PERFORM Place the cursor at the desired time tip, click and hold down the mouse button, and drag it to include the desired irrigation duration

Crop Management Technologies

IrriWise™ Manager

Optional:

 Parameters by selecting values from the dropdown lists using the arrows to increase/decrease values

⚠ *NOTE: The Irrigation Event Details screen has three layouts determined by the configuration of the water meter.*

Irrigation amount details window

Irrigation amount details window with total block amount and volume/area details

Irrigation amount details window with total block amount and volume/area details, when editing for a crop unit.

 OK

 When necessary

Optional:
Renaming an irrigation plan

 Rename Plan button
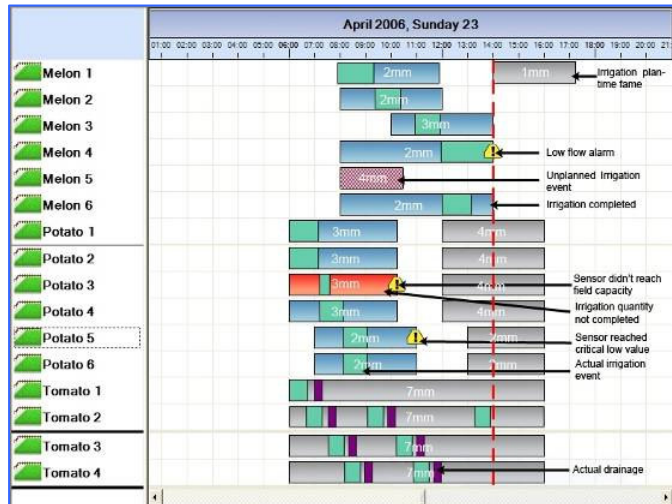

 Enter new name ➡ Save and Close

IrriWise™ Manager

6.2 Irrigation Plan View

The irrigation plan view uses a color scheme to display the present status of the various plan elements.

SELECT   Irrigation Plan Cycle Results

You will find several tabs at the bottom of the screen, containing information relevant to the irrigation plan.

Color Codes:
The current status of irrigation plan items is indicated by colors a follows:

	Future irrigation plan.
	Completed irrigation plan.
	Problematic irrigation plan - An irrigation plan that was not executed (where it should have been).
	Not planned irrigation plan – an irrigation plan that took place although it was not planed.
	Planned irrigation event.
	Drainage event.

> ⚠️ NOTE: Some events may have a yellow exclamation mark icon ⚠️. It means that an alarm was raised. If you move the mouse cursor above the icon, a tool tip with the alarm message will appear.

Cycle Amount Deviation from Irrigation Events:

> Cycle Amount Deviation For Irrigation Events: 0 %

> **SELECT** Tolerated deviation in percent, from values set for the irrigation events.

> ⚠️ NOTE: Deviations equal or smaller from the set deviation percentage will not trigger an alarm event.

View:
This tab let you select/deselect irrigation event to be included in the irrigation plan view.

> ☑ **View**
> ☑ Irrigation Plan Cycles   ☑ Irrigation Events   ☑ Drainage Irrigation Events
> ☑ Out Of Cycle Irrigation Events   ☑ Irrigation Cycle Warnings   ☑ Alarms
> ⌄ Time | ☑ View | 🗎 Global Plan Settings | 🎨 Color Codes

Time:
This tab let you select the time range for displaying the irrigation plan status in two ways:

- Specify time values

- Use a slider that narrows or widen the time range for displaying the irrigation plan status

> ⌄ **Time**
> Start: 07/21/2006   Zoom: 🔍 ————⬤———— 🔍
> End: 09/21/2006
> ⌄ Time | ☑ View | 🗎 Global Plan Settings | 🎨 Color Codes

IrriWise™ Manager

ADMINISTRATOR

7. BACKUP AND RESTORE

7.1   Backup and Restore Settings

IrriWise saves backup files automatically, which can be used to restore deleted data and configuration. To configure backup and restore properties:
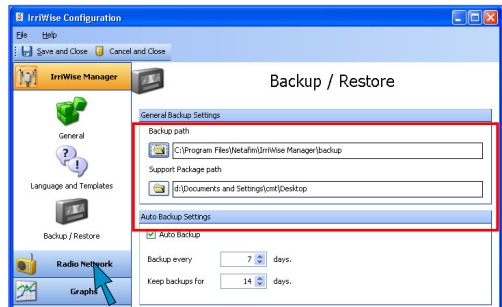
Tools ⇨ Options   *IrriWise Manager*

Backup and Restore

General Backup Settings:
The default locations for the backup files and support package are already selected.
To change these settings: click on the browse button and select a different location, or enter the required paths in Backup and Support fields.
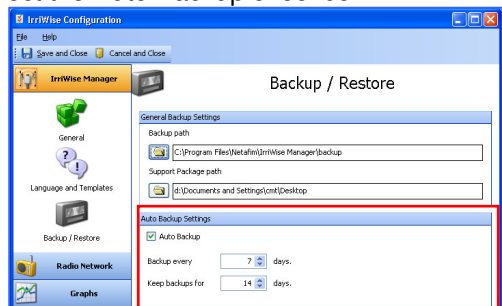
Browse   Different location/required path

Auto Backup Settings:
Auto backup settings are defined during the software installation. To modify the backup periods and retention time, enter new values in the appropriate fields. To disable auto backup, deselect the Auto Backup checkbox.

Crop Management Technologies
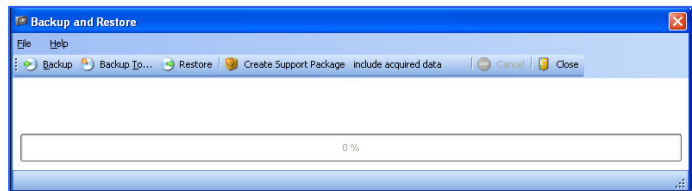
IrriWise™ Manager

7.2 Backup and Restore Features

IrriWise Manager allows you to backup your data and configuration, and use the system backup to restore the data and configuration where necessary.
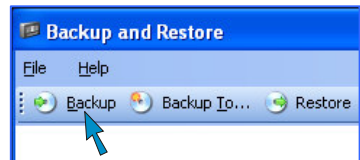
In IrriWise Manager:

Backup and Restore (can also be accessed in Tools menu)

To Create a Backup:

Backup

A backup file is created in the directory specified during the installation procedure. The backup settings can be changed from the Option's backup section (Tools->Options->Backup) see Backup and Restore Settings in section 7.1.

If you wish to place the backup file in a different location:
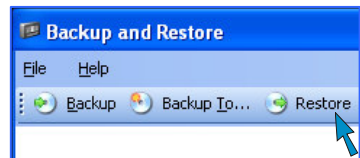
Backup To…⇨ Navigate to the desired location

To Restore From Backup:

Restore ⇨ File to restore from…

IrriWise Manager will check if the last backup is from today and alert you if it's not. IrriWise Manager will display a dialog box. Backup files are in Zip format.

⚠ *NOTE: In order to perform a system restore, IrriWise will restart automatically.*

IrriWise™ Manager

To Create a Support Package:
You can create a support package for the program. This package saves all the user-defined settings and parameters into a file, intended for the Netafim support personnel. Should you require assistance with your system and contact the Netafim support team, you might be requested to create a support package and send it to Netafim. The support package is created as a Zip file on the desktop.

Create Support Package
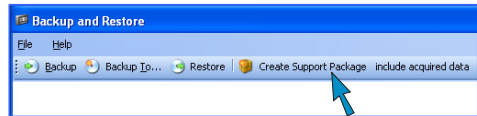
Include Acquired Data: Select this option (by clicking on it) to include all the acquired data in the support package file.

Import /Export:
IrriWise Manager lets you import and export data from and to external data files. The data files produced by IrriWise Manager are in Zip format.
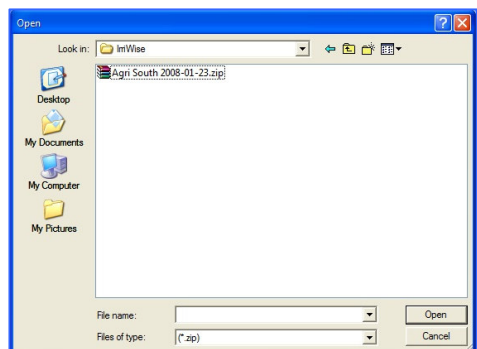
To Import Data:

Import/Export ⇨ Import From…⇨ Choose import source
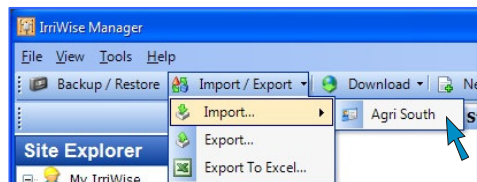
NOTE: Import is related to Contacts, and you must have at least one configured Contact in the system in order to perform import.
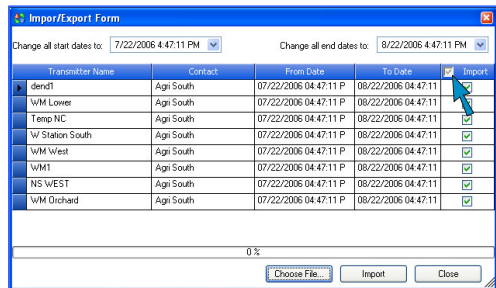
Choose File ⇨ Navigate to file ⇨ Import ⇨ Select it

IrriWise™ Manager

SELECT Rows to import (SHIFT to select +1 line)

Optional:
You can arrange the table data as follows (can be done in export window as well):

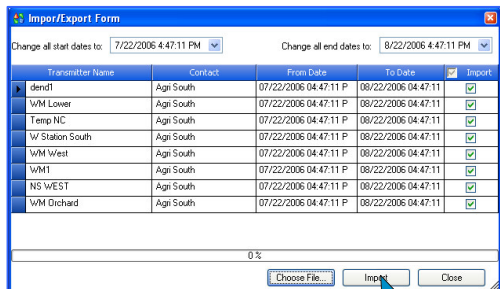**SELECT** New start and end dates (use field's arrows or select value and type)   →   **ARRANGE** Columns:

SELECT Header:
1 click: arrange column in ascending order
2 clicks: arrange column in descending order

SELECT *Import*

The file will be imported, and the import progress will be displayed in the progress bar at the bottom of the window.

To Export Data:
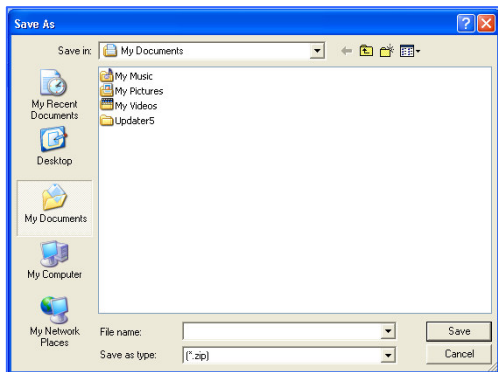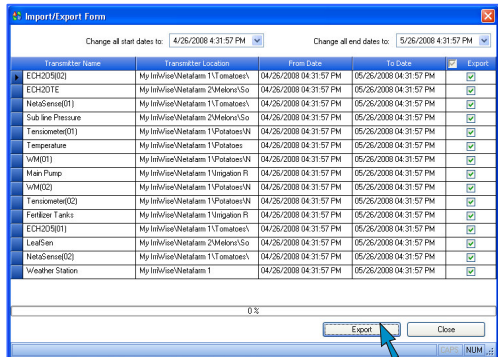

SELECT *Import/Export ⇨ Export*
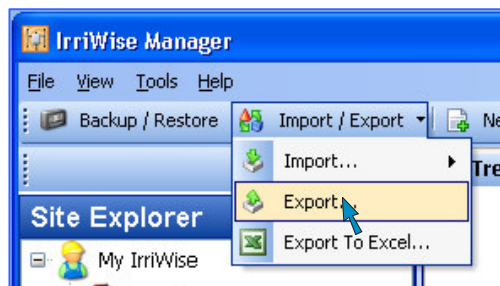
IrriWise™ Manager

SELECT Rows to export (SHIFT to select +1 line)

SELECT *Export*

SELECT Location for export files ⇨ *OK*

The data you selected will be exported to an IrriWise Manager export file in the location you specified. The progress of the export process will be displayed in the progress bar at the bottom of the window.
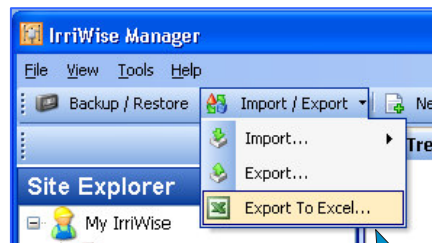
WAIT For export to complete ➡ **SELECT** *Close*

<u>To Export to Excel</u>:
You can choose to export the data to an excel file. The procedure is the same as described above.

⚠ *NOTE: Excel files are in Office 2003 format, which may not be compatible with earlier Excel versions.*

IrriWise™ Manager
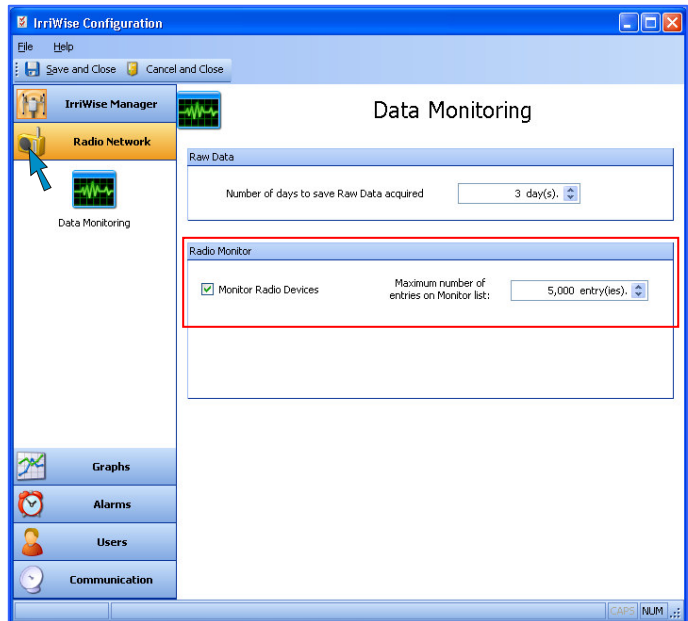
8. RADIO NETWORK

8.1 Radio Network Settings

The Radio Network window allows you to configure the network of radio devices used to transmit data from the field.

To configure radio data:

 Tools ⇨ Options ⇨ Radio Network

Raw Data:
The radio devices that are integrated in the system are capable of accumulating data before it is sent on regular intervals, as well as saving data that is already sent. Specify the number of days in which the acquired raw data is saved by the IrriWise Manager software. (See section 8.4 for further details.)

Radio Monitor:
To enable the radio monitoring tools, enable the Monitor Radio Devices checkbox. (See section 8.3 for further details.)

⚠ NOTE: The number of lines kept on the Raw Data Transmissions screen or the Radio Monitor screen will be as defined in the Maximum number of entries on the Monitor list selection box.

IrriWise™ Manager

8.2 Radio Network Topology

The system provides a display of all radio devices (transmitters, receivers and repeaters) in a table that allows you to control and manage the network components.

To view the radio network:

 Radio Network button

Optional:
You can sort table lists as follows:

 Desired column heading ➡ Ascending or descending order

 Table heading ➡ Group by...

Crop Management Technologies

IrriWise™ Manager

A path to expand → Source to expand

Ascending or descending order if necessary

Additional options:

In addition to the common application options, IrriWise Manager allows you to export the Radio Network to Excel, print it, and reset the status of the listed devices.
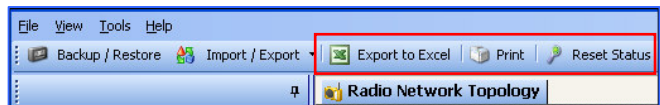
Export to Excel- Click on the Export to Excel button above the table, and select a destination for the Excel file.

Print- Opens a print preview window in which you can adjust various printing options.

Reset Status- Click to reset the status of all devices.
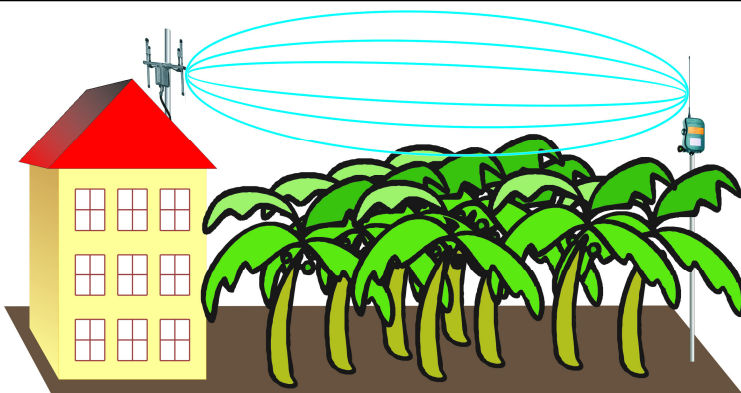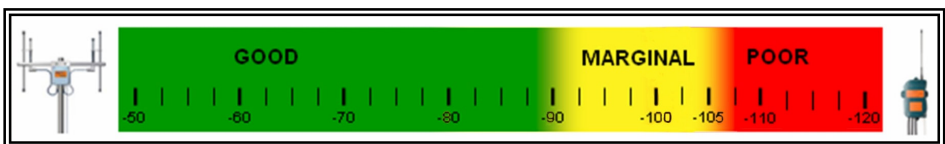
IrriWise™ Manager

8.3 Radio Monitor

Radio Monitor allows you to see the value of each radio transmission. Transmissions are color-coded according to signal strength.

SELECT — *Radio Monitor* icon at bottom of left pane

IrriWise Manager

File View Tools Help

Backup / Restore   Import / Export   Download   Print   Export to Excel   Clear List

Radio Monitor

Radio Monitor
- My IrriWise
  - Netafarm 1
  - Netafarm 2
  - Receiver
  - Repeater
- Remote Farm 1

Site Explorer
Radio Network
Alarms

Date	Device	Message	Received By	Transmissions	Data1	Data2	Data3	Data4	Volume
21/05/2008 10:27:54	10129	3	75	39319	13	56	16	74	-91.600
21/05/2008 10:27:45	10887	3	75	3938	12	12	10	10	-88.400
21/05/2008 10:26:47	10062	7	75	38276	0	16	0	0	-82.800
21/05/2008 10:26:39	13944	3	75	14145	127	17	133	190	-88.400
21/05/2008 10:26:30	10062	7	75	38276	48	96	1	2	-82.000
21/05/2008 10:26:13	10062	7	75	38276	16	160	59	0	-82.000
21/05/2008 10:25:31	12699	3	75	15810	161	160	210	210	-86.000
21/05/2008 10:25:19	11662	3	75	29556	9	9	9	9	-103.200
21/05/2008 10:24:53	10555	3	75	13408	209	210	209	209	-113.200
21/05/2008 10:23:01	12011	7	75	38735	0	0	0	0	-99.600
21/05/2008 10:22:32	10526	3	75	12304	3	3	0	0	-105.200
21/05/2008 10:22:13	13921	3	75	6234	212	227	131	103	-100.600
21/05/2008 10:21:52	12499	7	75	38853	0	0	0	0	-100.400
21/05/2008 10:21:49	10516	4	75	12699	0	4	210	0	-113.200
21/05/2008 10:21:10	12931	4	75	18052	0	165	108	161	-103.600
21/05/2008 10:20:27	11739	3	75	37010	0	0	0	0	-146.800
21/05/2008 10:20:04	10488	3	75	8220	7	7	0	0	-110.800
21/05/2008 10:19:59	13009	4	75	31275	1	146	92	11	-166.000
21/05/2008 10:18:57	11721	3	75	23117	0	0	0	0	-110.800
21/05/2008 10:18:42	10222	3	75	22543	148	148	148	148	-96.400
21/05/2008 10:18:35	11623	7	75	39564	15	240	0	17	-76.400
21/05/2008 10:18:19	11623	7	75	39564	69	144	9	35	-76.400
21/05/2008 10:18:02	11623	7	75	39564	15	240	56	0	-76.400
21/05/2008 10:16:50	12491	7	75	37545	0	0	0	0	-102.800

farmer is logged in.

Volume= Return signal strength index of transmission

GOOD   MARGINAL   POOR

-50   -60   -70   -80   -90   -100   -105   -110   -120

IrriWise™ Manager

8.4 Raw Transmissions Data

Raw Transmissions Data acquires and saves raw data by radio transmitting devices.

 Raw Transmissions Data icon at bottom of left pane

ID- Communication module ID #

Transmission- Number of transmissions that were received the same communication module.

Event- Transmitter transmits data every 30 mins. but it takes a reading from the sensor every 15 mins.:
  0= Reading taken in the first 15 mins.
  1= Reading taken in the second 15 mins.

Sensor #- Number of the transmitter from which data is being received.

Date- Date and time of the transmission.

Received- Receiver # that the transmission was received from.

Value- Digital value of the raw data.

Type- Transmitter protocol type.

History- History of the transmission: Now and last 3 transmissions (Hist1,2,3).

Values 2, 3, 4...- Digital value of the raw data.

IrriWise™ Manager

9. ALARM MODULES

9.1 Alarm Settings

IrriWise allows you to define alarms that are automatically activated when the alarm criteria is met based on set thresholds. When an alarm is raised there are 4 actions that can be taken (or none at all).

Each action includes all the actions above it (See section 5.3 for more information on Threshold Settings):

Background- The color of the threshold generating the alarm will be displayed as a led on the sensor's gauge.

Log history- Logs the alarm on the Alarms screen.

Popup windows- Pop up a message window when an alarm is raised.

SMS messages- Sent by the system to predefined mobile telephone numbers (up to three).

To configure the Alarms:

Tools ➪ Options ➪ Alarms
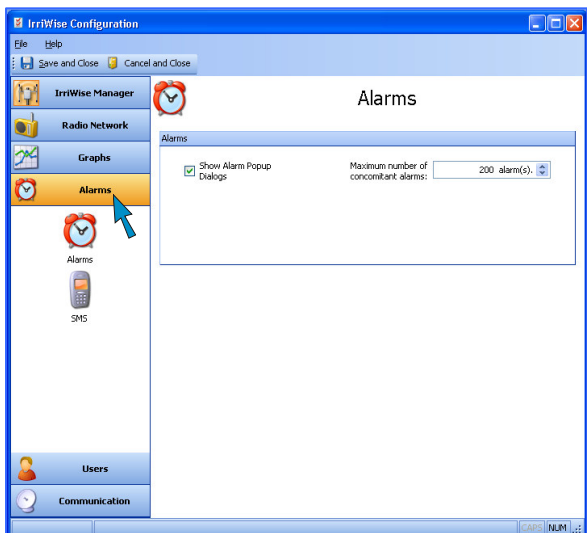
Show Alarm Popup Dialogs- Select this checkbox if you wish to show alarm pop-up dialogs.
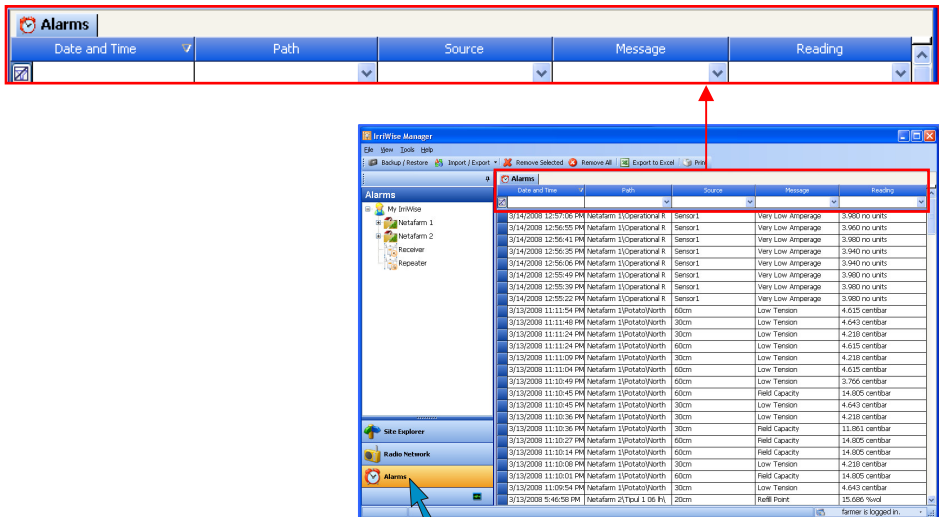
Maximum number of concomitant alarms- The number of alarms that the alarms screen will display. Change the number of alarms by using the up/down arrows.

Crop Management Technologies

IrriWise™ Manager

9.2   System Alarms

The Alarms window displays all alarm messages issued by the system.

To view the Alarms list:

Date and Time- When the threshold was reached.

Path- Location of the alarm.

Source- Which sensor reached the threshold.

Message- Alarm status message.

Reading- Digital value of the reached threshold.

Optional:
You can sort table lists as follows:
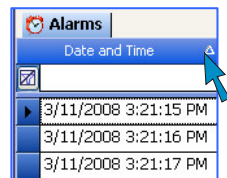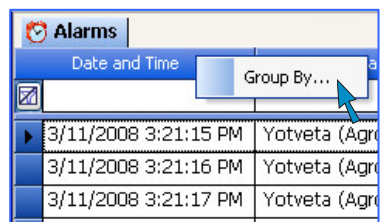

SELECT   Desired column heading ➡ ARRANGE   Ascending or descending order

RIGHT CLICK   Table heading ➡ SELECT   Group by...
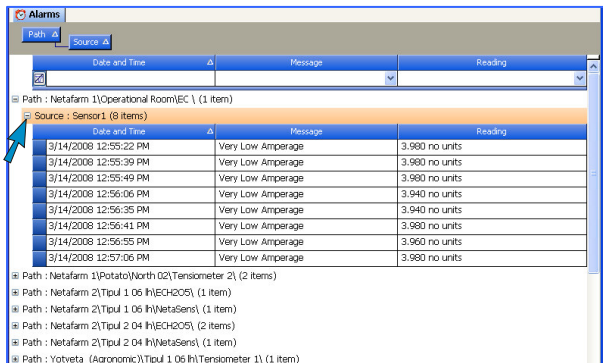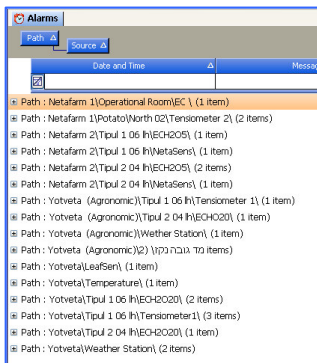
IrriWise™ Manager

Additional Options:
In addition to the common application options, IrriWise Manager allows you to remove a selected row or rows, export the alarm data to Excel and print it.

Remove Selected- Click on a row to select it and then click the Remove Selected button.

Remove All- Click on Remove All button to remove all alarm data from the list.

Export to Excel- Click on the Export to Excel button above the table, and select a destination for the Excel file.

Print- Opens a print preview window in which you can adjust various printing options.

IrriWise™ Manager

9.3 SMS Alarms

If SMS alarms are configured (and defined in a sensor's thresholds), a text message that details the failure is sent to preset numbers.

To configure SMS alarms:

 *Tools ➾ Options ➾ Alarms ➾ SMS icon*
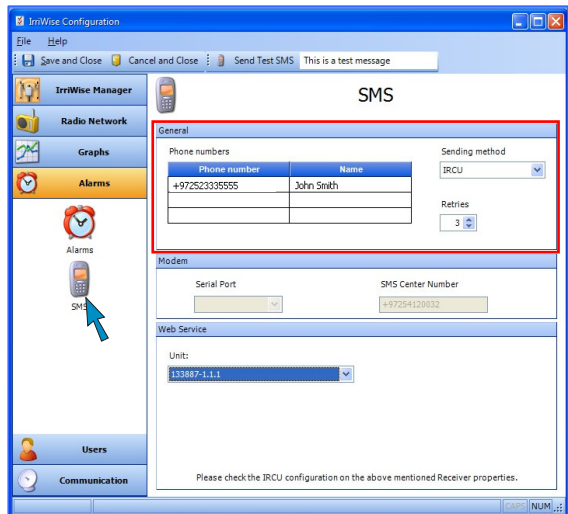
 Phone Number and Name ➡ **Sending Method:**
- **Modem**
- **iRCU**

Modem- Sending SMS messages using a modem through a serial port that communicates with an SMS center. (SMS center number is a number given to the user by the Cellular Provider from whom the user bought the SIM card for the relevant modem.)

If you are using a modem as the sending device, the fields in the Modem section are enabled:
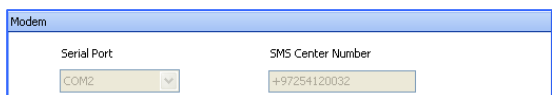
 COM port from Serial Port dropdown list ➡ **SMS Center Number**
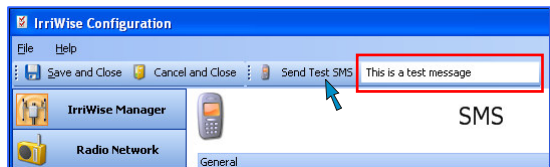
IrriWise™ Manager

iRCU- Sending SMS messages through the server.
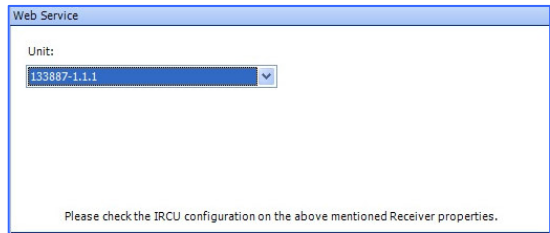
 Country ⇨ Service/SMS provider ⇨ Sender ⇨ User name ⇨ Password

 That all settings are correct. Send a test SMS as follows:

 Type a message in the text field on the toolbar   *Send Test SMS* button

 That a test message is sent   *Save and Close*

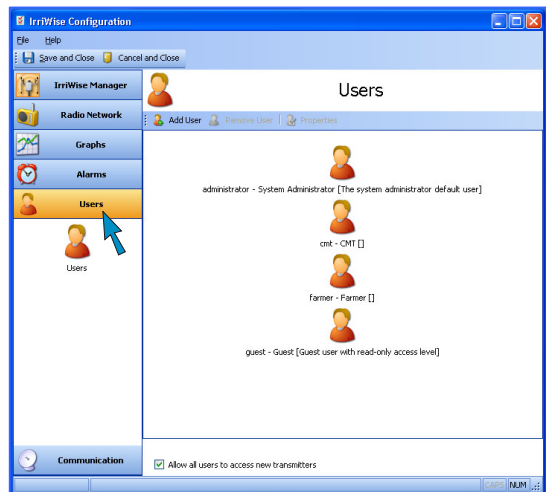# IrriWise™ Manager

10. MANAGING USERS

10.1 Adding a User

Users have two roles on the system: 1- To log on locally with permission levels to perform different tasks. 2- To log on remotely (only when an iRCU is installed in the field). The remote side creates a contact that has a username and password corresponding to a user on the local side having access rights to different locations and transmitters to be able to download from. To view more information on remote users and creating a contact, see section 11.7.

Users

The users setup allows you to create, configure, manage and delete system users.

Tools ➪ Options ➪ Users

To Add a user:

Add User
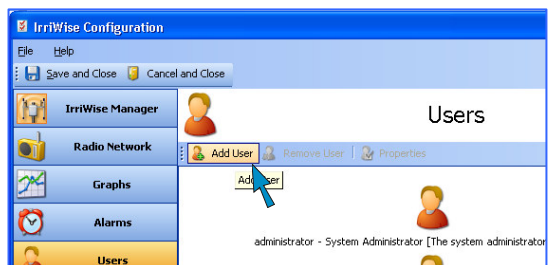
IrriWise™ Manager

> 👉 **PERFORM** Select a name (description is optional) ⇨ Create a username and password ⇨ Choose access level

Access Level:
Configure the user's access privileges by selecting the desired option from the dropdown list.

Read Only- The user will not be able to enter data or make any changes.

Normal User- Full read & write privileges.

Power User- Administrator privileges, including user management.

Field Support (Installer)- Special user designed for use by field support engineers.
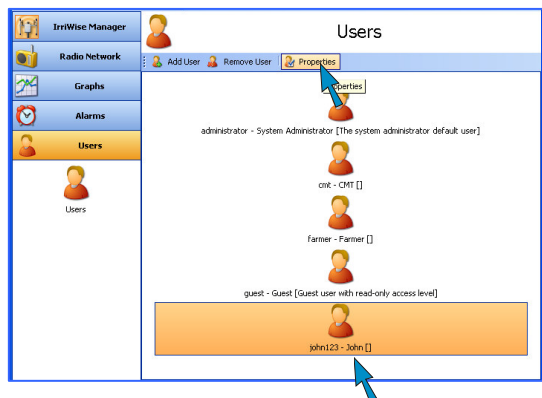
IrriWise™ Manager

SELECT Save and Close
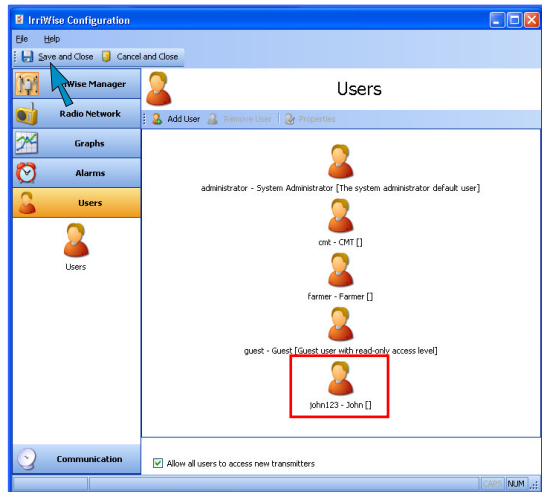
When a new user is saved and a contact is then created, the contact icon will appear on the Contacts list.

10.2 Editing a User
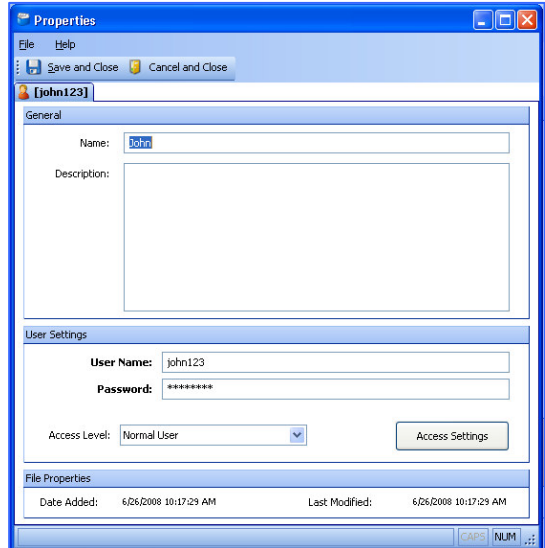
To edit user details:

SELECT Desired user ➪ Properties

Crop Management Technologies
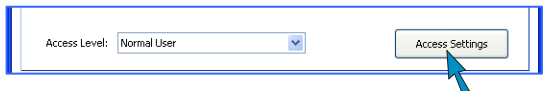
IrriWise™ Manager

☞ **PERFORM** Edit details as required

☜ **SELECT** *Save and Close*

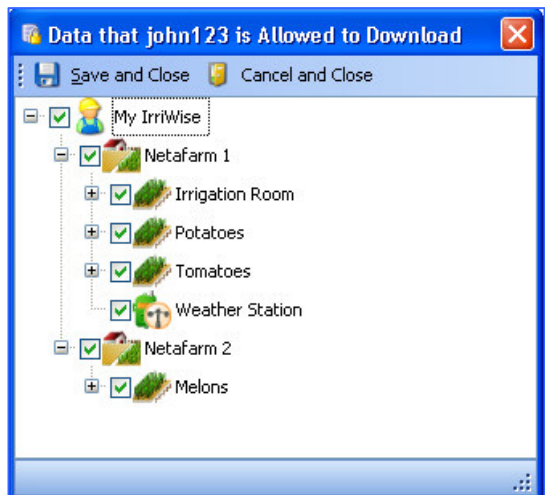When editing the properties of an existing user, a button named Access Settings is available.

Clicking the Access Settings button opens the permissions window.
In order to set permission:
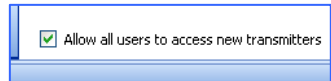
☞ **PERFORM** Check or uncheck desired permissions

☜ **SELECT** *Save and Close*

Crop Management Technologies

IrriWise™ Manager

Transmitter Access:
When this option is set, all new transmitters can be accessed by all users.
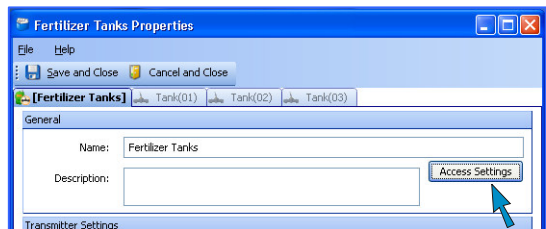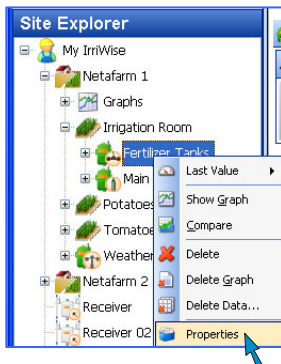

If you wish to set access for new transmitters manually, uncheck this option.

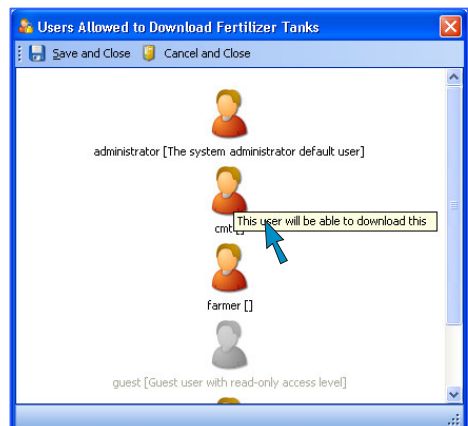If you wish to grant specific users access to certain transmitters:

 Desired transmitter from Site Explorer tree ➩ *Properties* ➩ *Access Settings* in Properties window

 Users you wish NOT to have access to chosen transmitter

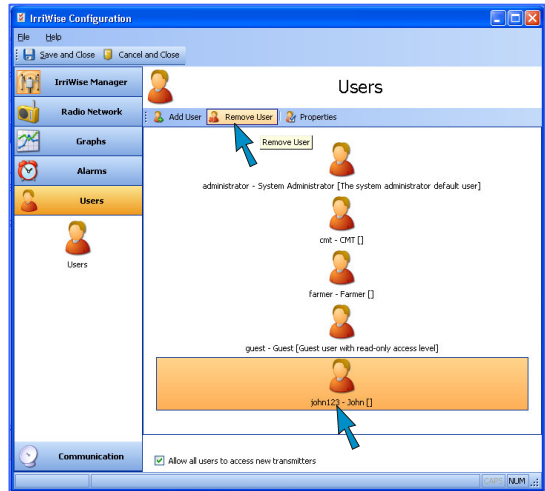⚠️ NOTE: They will appear as grey shaded, all other colored users will have access rights.

Crop Management Technologies

IrriWise™ Manager

To delete a user:

 Desired user ⇨ *Remove User*

IrriWise™ Manager
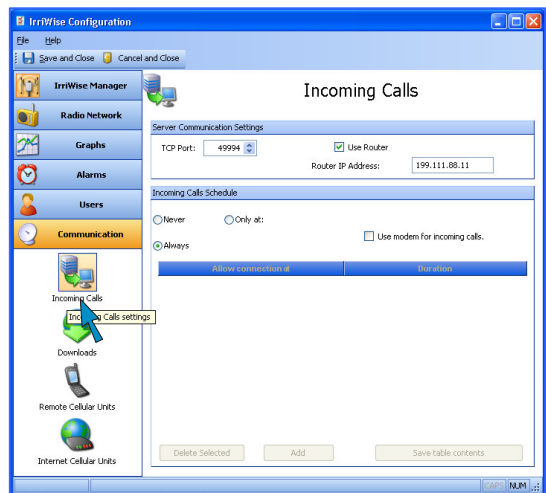
11. COMMUNICATION

11.1 Incoming Call Settings

The communication window allows you to set up the properties of incoming calls, downloads, and remote cellular units.

To configure incoming call settings:

Tools ➪ *Options* ➪ *Communication* ➪ *Incoming Calls* icon

Server communication settings

TCP Port- The port used for the TCP protocol.

Using arrows (or type in new value)

Use Router- Select this option if you use a router for communication. If this option is selected, the Router IP Address field is enabled.

IP address

IrriWise™ Manager

Incoming Calls Schedule

The Incoming Calls window allows scheduling of incoming calls. Select options in the Incoming Calls as follows:

Use modem for incoming calls- Select this checkbox if you use your modem for your incoming calls, rather than the internet.

Never- Never accept incoming calls

Always- Always accept incoming calls

Only at- Accept incoming calls only if the calls are scheduled in the table below. If selected, the table fields are enabled.

To schedule a specific time to receive calls:

SELECT *Only at:* ⇨ *Add*

SELECT Desired time and duration by using the arrows

REPEAT Steps to add as many scheduling items as needed

To delete a schedule:

SELECT Blue square with arrow of desired row to highlight item

SELECT *Delete Selected*

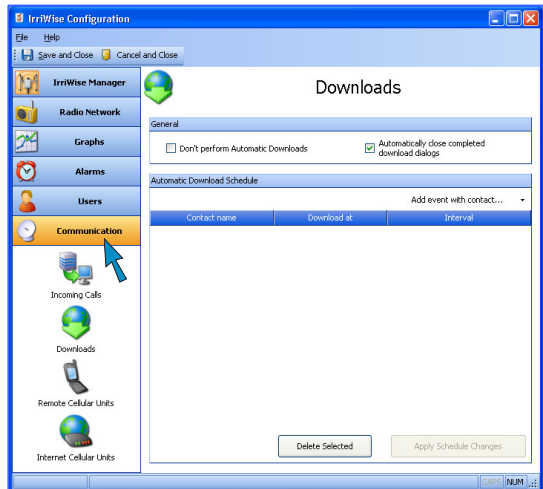**Crop Management Technologies**

11.2   Download Settings

The Downloads section allows you to define the download properties of contacts data. Contacts are remote locations that are displayed on your computer, and allow you to download data from that location.

To configure download settings:

Tools ⇨ Options ⇨ Communication ⇨ Downloads icon

Don't perform automatic Downloads- If selected; IrriWise Manager will not download contacts data automatically.

Automatically close completed download dialogs- Close completed download dialogs automatically.

Automatic Download Schedule- Contains a table with scheduled downloads from contacts.

Optional:
You can sort table lists as follows:

Desired column heading   ➡   Ascending or descending order
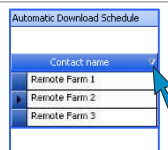
To modify the download time in the Download column:

Select time field (*Download at*)   ➡   Using arrows (or type in new value)
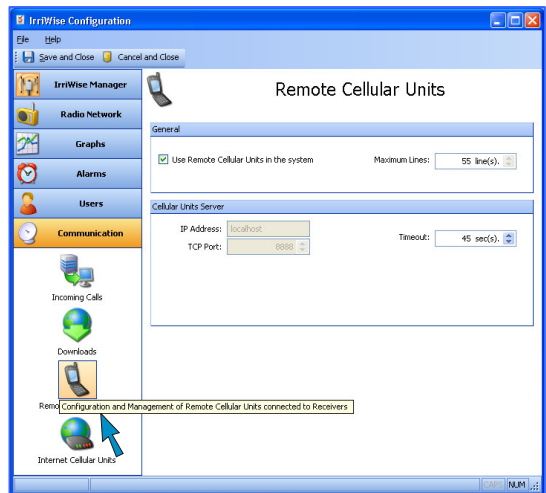
IrriWise™ Manager

11.3 Remote Cellular Unit Settings

The Remote Cellular Units window allows you to configure the use of remote cellular units.

To configure remote cellular unit settings:

SELECT *Tools ➪ Options ➪ Communication ➪ Remote Cellular Units icon*

General

Use Remote Cellular Units in the System- Select this checkbox to enable the use of Remote Cellular Units.

Maximum lines- The number of transmission lines that the cellular unit sends with each cellular packet.

Cellular Units Server

SELECT
IP address- Cellular units server IP address
TCP Port- Number of TCP Port
Timeout- The time to wait before aborting the cellular call, if the server does not respond.

➡ **SELECT** *Save and Close*

IrriWise™ Manager

11.4 Internet Cellular Units Settings

The Internet Cellular Units window allows you to configure the use of the iRCU. The iRCU also sends out an alert via SMS after setting thresholds within the IrriWise Manager.
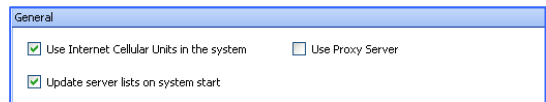
SELECT *Tools ➪ Options ➪ Communication ➪ Remote Cellular Units icon*
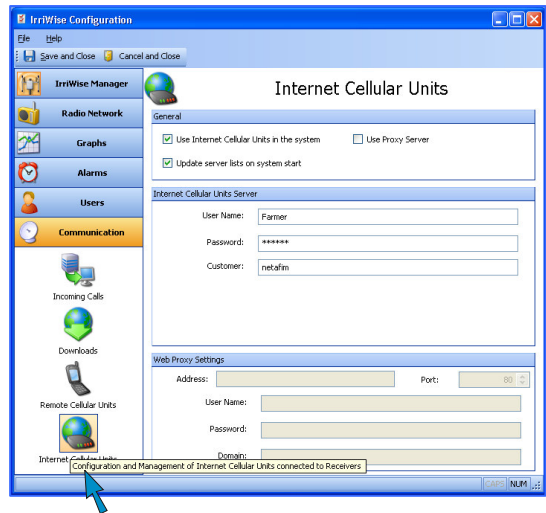
General

SELECT *➪ Use Internet Cellular Units in the system ➪ Update server lists on system start (optional) ➪ Use Proxy server (optional)*

Internet Cellular Units Server

SELECT *User Name and Password ➪ Save and Close*

IrriWise™ Manager

In Site Explorer:

RIGHT CLICK *My IrriWise* ➡ SELECT *New Receiver*
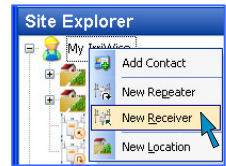
➪Name for receiver
➪Enter ID number of receiver
➪Connected through a
   cellular unit checkbox
➪Comm. Port: IRCU
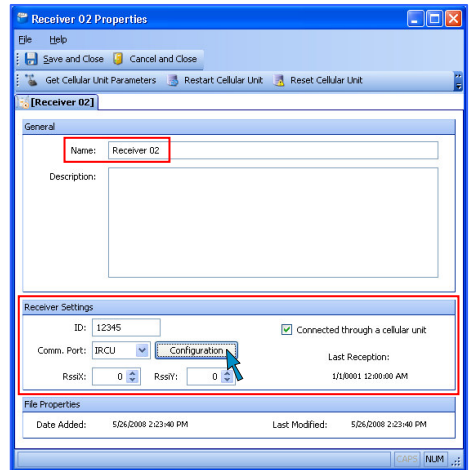
Configuration button

➪Unit: Choose unit listed by serial number from the dropdown list

⚠ *NOTE: After choosing a unit, please close the window, get cellular unit parameters, check and confirm the parameters.*

➪Cellular Provider: Choose provider from dropdown list. (If you cellular provider is not listed, contact your Netafim representative).
➪Enter SIM card number.
➪Enter an Emergency Phone Number for which to receive alarms via SMS in case of lost connection.
➪Enter Cellular Unit Phone Number of the iRCU itself.
➪Poll unit: select how often you wish to connect to server and receive data.

Close (to close this window)
➪ *Save and Close* (receiver properties settings)
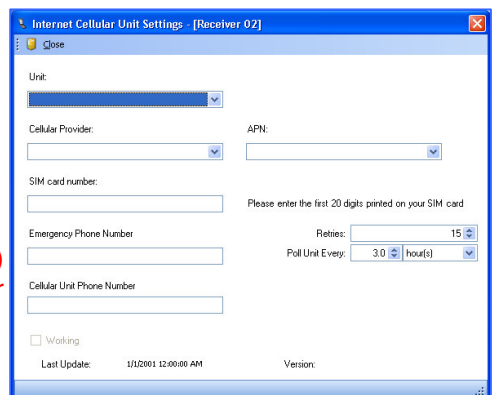
IrriWise™ Manager

11.5 iRCU (Internet Remote Cellular Unit) and SMS

The iRCU is a unit that uses GPRS technology to transfer data to remote locations making the storage and retrieval of information simpler and more efficient. All information collected is stored by the server and can be retrieved via internet from any location using a selected User Name and Password. The iRCU may also send an alarm via SMS after setting thresholds within the IrriWise Manager.

RIGHT CLICK Receiver with iRCU → **SELECT** Desired action from menu
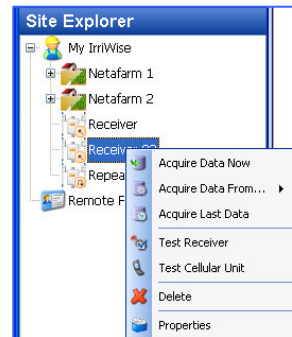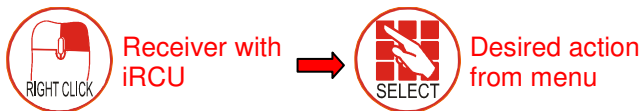
Acquire data Now- Acquire data from the last time data was acquired up until now.

Acquire Data From...- Presents a calendar where you can select a date from which start to acquire data from.
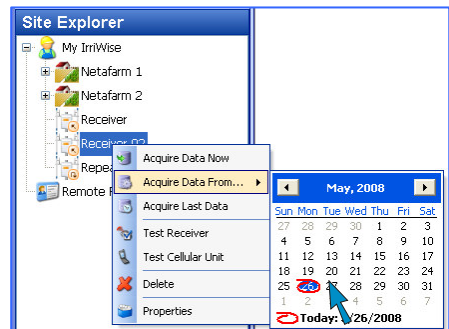
Acquire last Data- Get the most current data only (from the last 45 minutes).

Test Receiver- Test the receiver's functioning and availability (through the cellular unit).

Test Cellular Unit- Test the cellular unit's functioning and availability.

Delete- Delete the receiver.

Properties- Open the receiver properties for editing.

Crop Management Technologies
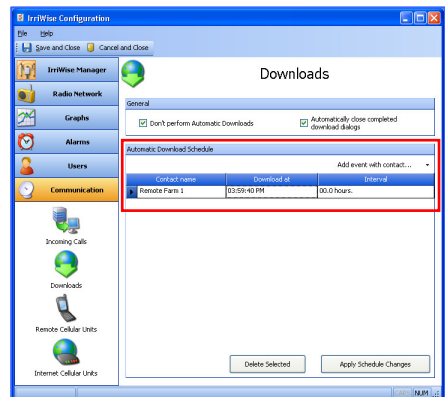
IrriWise™ Manager

11.6   Create a New Download

To Create a new automatic download:

Tools ➪ *Options* ➪ *Communication* ➪ *Downloads* ➪ *Add event with contact...* ➪ Select a contact
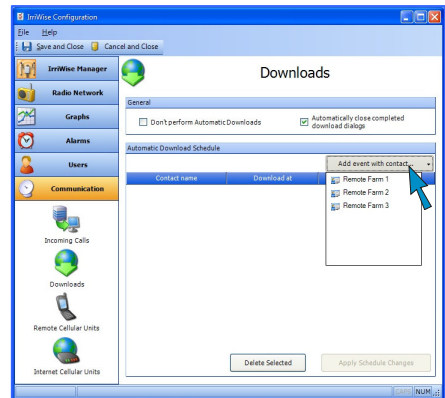
A new row appears in the automatic download table, displaying the name of the contact and the current time.

To modify the download time in the Download column:

Time field (*Download at...*column)   ➡   Using arrows (or type in new value)

Crop Management Technologies

IrriWise™ Manager

To modify the interval in the Interval column:

SELECT Interval field column ➡ **ADJUST** Using arrows (or type in new value)

Automatic Download Schedule

Add event with contact... ▾

Contact name	Download at	Interval
Remote Farm 1	03:59:40 AM	_0.1 hours.

⚠ *NOTE: If intervals are configured, they overrule the configured download time in the Download at field.*

SELECT *Apply Schedule Changes* when done

The download is scheduled.

To delete an automatic download:

SELECT Row ➡ **SELECT** *Delete*

SELECT *Apply Schedule Changes* when done

IrriWise™ Manager

11.7   Add a New Contact

IrriWise Manager allows you to display and download data from a remote location. The remote location is referred to as Contact.

To add a new contact:

RIGHT CLICK — On left pane (not on an element)

SELECT — *Add Contact*

PERFORM — Fill contact details on the form

SELECT — *Save and Close*

The user name and password are allocated by the remote location. See how the remote user is created in section 10.1***

> ⚠ **Download list:** *When creating a new contact, the Download List button is not available until you save and close the preferences window, and then download the tree structure of the remote location for the first time.*

The new contact will be displayed at the bottom of the Site Explorer, with a dedicated icon.

Crop Management Technologies
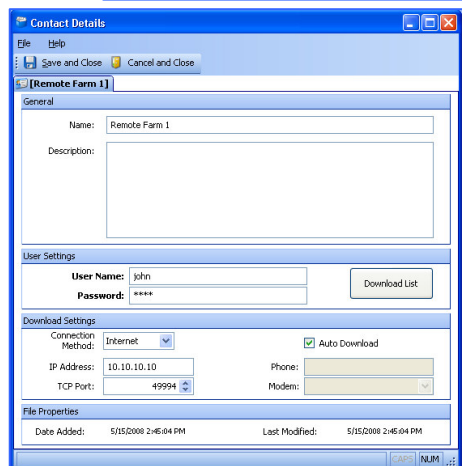
IrriWise™ Manager

11.8   Downloading From a Remote Location

Download Now:

On the new contact
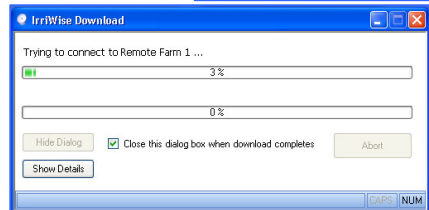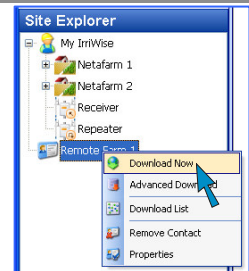
Download Now

The data structure of the remote location will be downloaded (without the data) and displayed on your computer. The remote location elements that are downloaded to your computer are determined by the user access rights, which were configured on the remote location. The system will download the contact's devices and lists.

On the new contact → Download List
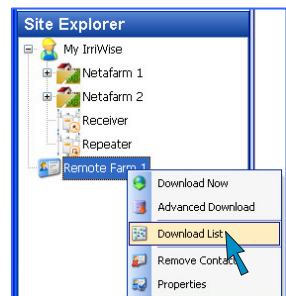
Devices to be automatically downloaded from every time a Download Now (or automatic download) is done

Crop Management Technologies

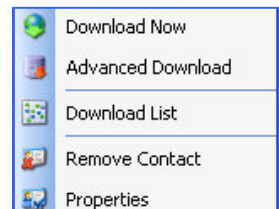# IrriWise™ Manager

On the new contact ➡ Download Now

This will actually download data for selected devices.
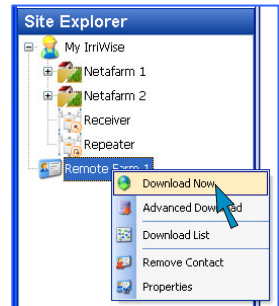
From this point onward, every download now or automatic download for that contact will keep data up-to-date regarding devices selected.

Contact Menu:
IrriWise Manager offers you several options for downloading contact data.

Download Now- Right-click on a contact and select Download Now from the menu. Data will be downloaded for items that are selected in the download list (see above).
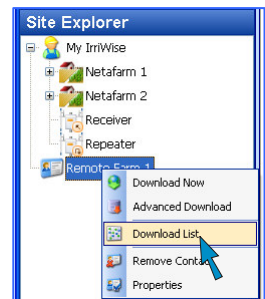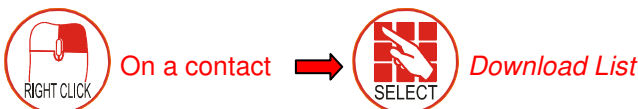
Advanced Download- Selecting Advanced Download will open the download list and allow you to make a one-time selection of list items for which you want to download data. This selection will overrule other system configuration, but will only apply for the current download session, and will not be saved.

Download List- Select to open and configure the download list.

Remove Contact- Right click on a contact and select to remove the contact from the Site Explorer.

Properties- Right click on a contact and select to open the Contact Details window for editing.

Downloading Contact Data:

On a contact ➡ Download List

Crop Management Technologies

IrriWise™ Manager

Elements to download data from

⇨ **OK**

For download to complete

List Manipulation:

The general table manipulation options of IrriWise Manager are also applicable to the download list.

Remove Selected- Removing rows from the list: Select rows by clicking on the blue square to the right of the row, and click. To select several consequent rows, hold down the mouse button and drag the cursor to include the desired rows.

Removing deleted rows- If elements on the list were removed on the remote location, their status on the Download list will appear as Deleted. To remove all deleted items from the list, click Remove Deleted.
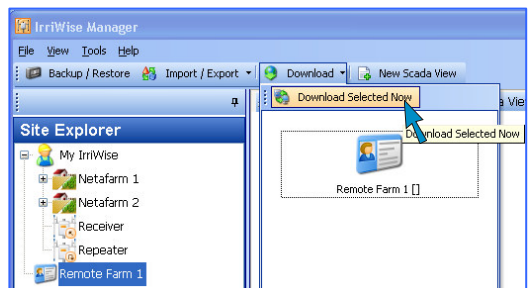
Add New- Click on Add New to select for download all the list items that are marked as New. (Status = New).

Performing immediate download and Toggling Download on/off:

You can also perform immediate download by using the Download button in the top button bar.

Download* button ⇨ Contact ⇨ *Download Selected Now

Automatic Downloads:

For automatic download configuration, please refer to section 11.6.

Crop Management Technologies